Impact of Interest Rate Deregulation on Corporate Financial Strategies (CFS) of Manufacturing Industries in Nigeria

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July 2015.

Title Page

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Being a Ph.D Thesis Submitted to the Department of Accounting, Banking & Finance. Faculty of Management Sciences. Delta State University, Abraka. (Asaba Campus) in Partial Fulfillment of the Requirements for the Award of Ph.D Banking & Finance (Corporate Finance) of the University.

Supervisors:

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July 2015

Declaration Page

I hereby declare that this research work titled: "**Impact of Interest Rate Deregulation on Corporate Financial Strategies of Manufacturing Industry in Nigeria** is my original work and has not been previously presented wholly or in part towards the award of any score or any degree.

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Certification Page

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The Board of Examiners certifies as follows:

That to the best of our knowledge, this is the original work of the candidate.

That this thesis is accepted in partial fulfillment of the requirements for the award of the degree of Doctor of Philosophy (Ph.D) Banking and Finance (Corporate Finance).

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Dedication

This work is dedicated to:

The Holy Spirit without whom no human effort can yield any good fruit.

The memories of my Late Mother and friend, Mrs. Grace Ifeomadiogor Ehiedu (Nee Buzugbe) who paid the dues and denied herself pleasures of life so that I can become a useful member of the society.

Hon. & Mrs Mich Ogwa for their large heart in assisting the poor in the society.

Acknowledgements

I am highly indebted to my lead supervisor, Professor Osiegbu Patrick I., who took pains to ensure the completeness of this research work. You were always there for me; always calm, calculated and careful. I appreciate all your effort, corrections, suggestions and encouragement. The good Lord will continue to bless you with good health. I also acknowledge the person of Dr. Olannye A.P. who contributed immensely to the successful completion of this work. I salute your academic leadership sir!

I greatly appreciate my colleagues in the Faculty of Management Sciences of Delta State University. I must mention some individuals like the Dean of the Faculty of Management Sciences, Delta State University, Asaba Campus, Professor Salami C.G.E. He is a father and a builder of human resources. I will not forget others like Dr. (Mrs). A. C. Onuoarah (Mama Banking); Mr. A.O.Odita (Okosisi/Mkpologu); Dr. A.O. Agbada; Dr. Dabor E.L; Dr. S. E. Ekakitie; Dr. R.K. Muroku; Mr. A.E. Ekhrijakpor; High Chief Henry Nzekwe (The Ochiligwe of Onicha-Ugbo); Dr. J. Ogbor; Professor O.E. Inoni who will within 24 hours ask me 24 times "Victor how is your work going?"; Dr. C.O. Chukwuji; my brother and friend, Bar.(Pst) U.G. Oyibodoro; Mr. Akakabota Edward; Mr. J.O. Okolie; Mr. Ediri Ugherughe; Dr. Osuji C.C.; Dr. Tennison Oghoghome; Mr. O.S. Alagba; Mr. R. Ajobo; Mr. M.O. Odukuye; Mr, Okwuise U.G.; Mr. Felix Ighosewe; Mr. Sunny Temile; Dr.(Mrs). K.O. Okwuanaso; Prof. Famous Izedonmi; M.Sc Economics 2000/2001 set (UNIBEN); Dr. Okoro-Boi; Dr. O.T. Ekanem; Mr. T. Ajobor; HOD, Management and Marketing Department, Faculty of Management Sciences, Delta State University, Asaba Campus, Dr. Felix Oghenerukevwe Orishede (My Pope); Dr. Sunny Ekakitie;

Mr. Idowu Eferakeya; Prof. J.O. Agbamu; Prof. P.S. Igbigbi and others so numerous to mention.

I like to further acknowledge the large heart of Hon. & Mrs Mich Ogwa. May God bless you and every work of your hand sir. Other people include His Royal Majesty, Dr. E.O. Efeizomor, the Obi of Owa Kingdom; Mirabel Ngozi Asiwe; Mrs. Chinyelugo Ezea; Bar. & Mrs. Moses Okafor; His Excellency, High Chief Godson Echejile; Hon. & Mrs. Dumbiri Uweh, Mr & Mrs. Victor C. Uweh; Prof & Dr (Mrs) Bernald Ejechi, Rev. & Mrs. Michael Unah; Mr & Mrs. Cliford Umeri; Chief & Mrs. M. Irabor; Dr & Mrs. C.E.O. Anuku; Mr. & Mrs. Ese Ewuba; Mr & Mrs. James Ojoh; Bar. & Mrs. Joe Egwu, Prince & Mrs. Solomon Efeizomor, the Edaiken of Owa Kingdom; Prince & Mrs. George Efeizomor; my beloved family friends Mr. & Mrs. Jude Obimgba & Family; Believers' Baptist Church family and others too many to be listed. I thank you all.

My late mother, Mrs. Grace Ifeomadiogor Ehiedu (Nee Buzugbe) who ensured I had the much needed foundation. She paid her dues and owe me nothing before her home call. Though you announced your death 24 hours to the incident, we never took you serious because you were not sick, coupled with the fact that your aged mother was still alive then. I thank God that I crossed your path and experienced your undiluted kindness; unconditional love for God Almighty and humanity; commitment to duty, neatness, perseverance, humility, simplicity and truthfulness. You remain my dearest mother even in death. Good night dear mother and best friend ever. God be with you till we meet again, in Jesus Name, amen.

My very stunning jewel and good-natured wife, friend and confidant Mrs. Queensley F.A. Victor-Ehiedu who stood firmly by me, providing all the support and encouragement; my two wonderfully and fearfully created daughters Grace Chibudom Victor-Ehiedu and Deborah Chimmuanya Victor-Ehiedu. I will not forget also, my sister Gloria and her breathtaking daughter Flourish, sister Augusta and family; brother Godwin and family; brother Jonathan and family, I love you all. To all my past and present students whom I taught in College of Technical Education, Azara, Bauchi State, College of Agriculture, Ozoro, Delta State Polytechnic, Ozoro, Covenant University, Otta and Delta State University Asaba Campus, I say thank you all.

Above all, my deepest appreciation goes to God who compassionately showered His grace for the accomplishment of this feat because without His Holy Spirit, no human effort can yield any good fruit. Thank you Lord and to You be all the glory now and forever, amen.

Abstract:

The main objective of the study is to examine the impact of interest rate deregulation on corporate financial strategies (CFS) of manufacturing industry in Nigeria from 1987 to 2013, with a view of assessing the effects and challenges of interest rate deregulation policy on various financing strategies of the manufacturing sector of the economy. This study covered twenty two (22) active quoted manufacturing companies from the major industrial classifications. Secondary data were collected from books, journals and various balance sheets using the content analysis of documents from all the sampled companies. The CFS which formed the dependent variables are bonds, preference shares, rights issue, retained earnings and ordinary shares while the independent variable is interest rate as issued by the Central Bank of Nigeria (CBN). The results of the coefficients (a_o and a_1) in the research work were in line with the apriori expectations. The data was analyzed using the E-View version 5.0 statistical tool. Our empirical investigation engaged three methods in order to determine the relationship between interest rate deregulation and CFS of listed manufacturing firms in Nigeria. First, the group unit root of stationary for the five variables utilized for the study was conducted using the Augmented Dickey Fuller (ADF) test and Phillips-Perron (PP) test of stationarity. Second, is the Johansen test of cointegration and third is the Ordinary Least Square Regression Analysis for the pooled ordinary least squares (Pooled OLS) panel analytical data. Among others, the work found that the market debt-equity ratio for the firms increased by 0.06% respectively given the changes in deposit interest rate and lending interest rates. This observation suggests that active participations of the firms in the Nigerian Stock Exchange and further participation of the firms in the international equity markets since internationally and locally financed firms exhibit lower debt-equity ratios. No doubt, lower interest rate (though still on the high side), in the time of deregulation positively impacted on investment and output within the period under review. Again, the panel least square analyses for impact of interest rate deregulation on corporate investment for the firms increased by 0.09% and 0.06% respectively given the changes in deposit interest rate and lending interest rates. This observation suggests that the Nigerian investors and their firms prefer to plough back their profits for reinvestment in addition to borrowing due to lower interest rates compared to market based interest rate period. Based on the findings of this research work, it is generally recommended that though interest rate deregulation policies have been supportive to the manufacturing sector of the Nigerian economy, more needs to done to make the policy realise its full objectives both on productivity, growth, profitability of manufacturing sector and financial strategies which can be achieved by financial deepening and removal of the bottlenecks in the financial sectors of the economy. The research work contributed to knowledge by introducing a model for predicting changes in corporate financial strategies of manufacturing industries in Nigeria amongst others.

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Chapter One

1.0. Introduction

1.1. Background of the Study

Prior to the introduction of Structural Adjustment Programmes (SAP) in Nigeria in 1986, the Nigerian financial sector was characterized by rigid exchange rate and interest rate controls, mandatory sectoral allocation of bank credit to the private sector, all of which engendered distortion and inefficiencies that results to low direct investment. Funds were inadequate, the Nigeria currency was overvalued and the monetary and credit aggregate moved rather sluggishly such that the economy was sort of engulfed with a general stillness.

In line with the adoption of the market-based technique of monetary management, interest rates policy remained flexible and responsive to changes in market conditions. However, as an instrument of monetary policy the Central Bank of Nigeria CBN (2010) indirectly influenced the level and direction of changes in interest rate movements through its interventions on various money market assets especially the Minimum Rediscount Rate (MRR), as well as the stop rate of weekly tender for treasury bills. The MRR as the nominal anchor of CBN's interest rate policy continued to be used proactively in line with prevailing economic conditions while the rate of treasury bills is made market related and competitive with comparable money market instruments, CBN (2010). Further, the MRR has undergone some fluctuations since 1987 to date as a result of the changes in the CBN policies which in turn have changed the overall economic conditions.

In August 1987, interest rate was 15.0% and was reduced to 12.75% in December of 1987 with the objective of stimulating investment and growth in the economy. In 1989, the MRR was raised to 13.25% in order to contain inflation. To further deregulate interest rate management, the cap on interest rate was lifted in 1992 and re-imposed in 1994 when inflationary spiral could not be contained. However, in October 1996, interest rates were fully deregulated with the banks given freedom to determine the structure of interest rates in consultation with their customers (i.e. left to be determined by the natural forces of demand and supply).

The CBN, however, retained its discretionary power to intervene in the money market to ensure orderly developments in interest rates. The policy of interest rate deregulation has been retained since 1997. Interestingly, the MRR was replaced with the Monetary Policy Rate (MPR). Again, the MPR was brought down to 10% from 14% MRR, with a lending rate of 13% and a deposit rate of 7% which stood as a standing facility intended to stem volatility in interest rates especially that of the interbank rates. It is pertinent to know that under a deregulated interest rate system the market plays a vital role in determining the interest; this implies that financial institutions, individuals and companies are free to negotiate and accept a suitable interest rate on deposits and loans respectively.

The financial system of most developing nations has come under stress as a result of the economic shocks of the 1980s. Additionally, financial repression, largely manifested through indiscriminate distortions of financial prices including interest rates, has tended to reduce the real rate of growth and the real size of the financial system relative to nonfinancial magnitudes. More importantly, financial repression has retarded the development process as envisaged by Shaw (2012). Undoubtedly,

governments' past efforts to promote economic development by controlling interest rates and securing "inexpensive" funding for their own activities have undermined financial development.

Consequently, Onyechie (2010) stated that most countries, both developed, and developing economies have taken steps to deregulate their interest rates as part of the reform of the entire financial system. Such deregulation represents a policy response, encompassing a package of measures to remove all undesirable state imposed constraints on the free working of the financial markets. The measures include the removal of interest rate ceilings, and loosening of deposit and credit controls

The Nigerian economy witnessed such financial repression in the early 1980s. There were rigid exchange and interest rate controls resulting in low direct investment. Funds were inadequate as there was a general stillness in the economy. Monetary and credit aggregates moved rather sluggishly. Consequently, there was a persistent pressure on the financial sector, which in turn necessitated a deregulation of the financial system.

According to Onyekwere (2010), it was in response to these developments, that the government deregulated interest rates in 1987 as part of the structural adjustment programme (SAP) policy package. The official position then was that interest rate deregulation would, among other things, enhance the provision of sufficient funds for investors, especially manufacturers (a priority sector), who are considered to be the prime agents, and by implication promoters of economic growth. However, in a policy reversal, the government in January 1994 out-rightly introduced some measure of regulation into interest rate management. It was

claimed that there were "wide variations and unnecessarily high rates" under the complete deregulation of interest rates. Immediately, deposit rates were once again set at 12% – 15% per annum while a ceiling of 21% per annum was fixed for lending.

However as a reversal policy, the government in January 1994 expressly introduced some measure of regulation into interest rate management owing to wide variations and unnecessarily high rate under the complete deregulation of interest rates. In light of the above, the deposit rates were once again set at 12.45% per annum while a ceiling of 21% per annum was fixed for lending. The cap on interest rates introduced in 1994 was retained in 1995 while a little modification for flexibility was lifted in October 1996 to pursue a flexible interest rate regime as observed by Onyekwere (2010). The lifting remained in force in 1997, thus enabling the pursuit of a flexible interest rate regime in which bank deposit and lending rates were largely determined by the forces of supply and demand for funds.

For the purpose of this research, interest rate is the independent variable as officially declared by the Central Bank of Nigeria (CBN) for each year under review while corporate financial strategies (CFS) include bonds, preference shares, rights issue, retained earnings and ordinary shares. These variables are strategic to manufacturing companies and they constitute our dependent variables.

These dependent variables: bonds, preference shares, rights issue, retained earnings and ordinary shares, represent the financing strategies (CFS) of manufacturing firms in Nigeria. The correlation existing between the deregulated interest rate and the individual dependent variables explains the impact and

relationship existing between them, vis-à-vis manufacturing firms' applications of the respective dependent variables as a result of interest rate deregulation.

Interest rate deregulation refers to a deliberate and systematic removal of regulatory controls and structures and complex operational guidelines in the administration and pricing system of interest rate. Most countries, both developed, and developing economies have taken steps to deregulate their interest rates as part of the reform of the entire financial system. Such deregulation represents a policy response, encompassing a package of measures to remove all undesirable state-imposed constraints on the free-working of the financial markets. The measures include the removal of interest rate ceilings; and loosening of deposit and credit controls.

Bond is a document (loan certificate) acknowledging indebtedness to the company. In other words, bonds are loans of a long-term nature. Ezirim (2011) noted that some experts have described a bond as a multiple loan of a company since it is contributed by large numbers of people and not by one person. Bonds/Debentures, which could be secured or unsecured represents the document which acknowledges the indebtedness to the company. In practice, the term 'debenture' may be restricted to secured loans. According to Akinsulire (2011), the main features are: They are not entitled to voting rights, they are fixed interest securities entitled to annual interest payments, the interest elements are tax deductable, they could be redeemable or convertible; and, the principal amounts are usually secured on the assets of the company and could have floating charge or fixed charge or a combination

Preference shares are shares that have fixed rate of dividend to be paid any time profit is made and dividend is declared. Preference share is usually a more expensive source of finance than debenture stock. This is because debentures are less risky and usually have tax shield (benefit). Other features of preference shares are that they are not entitled to any voting rights normally and their interest in the company is represented by dividend payment and principal repayment. Preference shares could be preferred or deferred, cumulative, participating, redeemable. Cumulative preference shares would have their dividend income accumulated and paid at future dates if the company has liquidity problems. As earlier noted, participating preference shareholders are entitled to a fixed dividend income per year (these may be cumulative) plus a further share in any other profits. In some cases, this further share could be after the ordinary shareholders have been paid a certain dividend. Akinsulire (2011) noted that preferred and deferred preference stock have characteristics similar to preferred and deferred ordinary shares.

Shoaib (2012) stated that rights issue which is also known as pre-emptive rights issue, subscription privilege issue and subscription rights issue is a method of raising new share capital by means of an offer to existing share holders, inviting them to subscribe to cash for new shares in proportion to their existing holdings. It is by far the most common method of raising new capital and may be made by private companies as well as public companies. The issue price is usually somewhat below the prevailing market value. This method avoids issuing costs if finance is to be obtained from the public. It confirms the financial stability of the company. If all shareholders take up their rights, the relative proportions in which the company is owned remain the same after the issue as before it.

In his opinion, Ezirim (2011) opined that retained earnings are earnings set aside out of net profits of the firm after all interests and dividends to preference shareholders have been paid. In other words, they are ploughed back into the business for considered profitable uses. Retained earnings are regular sources of funds to most firms (proprietorship, partnerships and companies) in the sense that the money which could have been distributed to owners as dividends are retained back for the smooth running of the company and as a cushion of safety in times of liquidity crises. Characteristically, all internally raised funds save a firm all the issuing costs associated with external sources. They are still an integral part of shareholders' funds. In other to justify them, the firm should earn a return on the funds over and above what the shareholders could have earned if they had been distributed as dividends. This is an opportunity cost to the shareholders should the firm be unable to meet that rate, it would seem to have an obligation to distribute the retention and reserves to the shareholders for other alternative uses.

Ordinary shares or equity capital is the traditional form of capital for new businesses and the base of support for borrowing by existing firms. The holders of this capital are the owners of the business. The right of the current shareholders to maintain their fractional ownership of a company by buying a proportional number of shares of any future issue of shares is known as pre-emptive right. Shareholders have a general pre-emptive right to anything of value that the company may wish to distribute as well as the ultimate control of the company affairs. Shareholders bear a huge portion of the entire risks associated with the company; hence, they expect a higher rate of return than most other providers of finance. Other features are that they expect and are entitled to a share of the profits of the company in the form of

dividends subject to the recommendation of the Directors and after all prior claims have been met. The ordinary shareholders have voting rights attached to their investments. They cannot redeem or reclaim their investment except by selling their shares or in the event of liquidation.

Ordinary shares could take the form of preferred, deferred or founders' ordinary shares. Preferred ordinary shares usually receive a fixed rate of dividend before the other ordinary shareholders. They may also be entitled to a further share of profit after their fixed entitlement (dividend). Deferred ordinary shares are usually residual the recipients after all claims including preferred ordinary shareholders have been settled. Deferred shares could be given to the sellers (owners) of a company acquired by another company. These serve as deferred payment for the purchase of company held back until enough profits emerge. These types of deferred ordinary shares are called founders' shares.

Conclusively, it is hoped that this work explains the defined relationship between the independent and dependent variables within the period under review.

1.2. Statement of the Problem

Business success and growth brings in its wake, demands for new funds. For instance, a new manufacturing company may be making more money because it is making more sales and getting more orders. But the company finds itself pressed harder for funds than ever before. The need for funds typically arises from the increased need to invest in working capital (inventories, receivables, cash etc) and in long-term assets (property, plant and equipment) to cope with the increasing demand for the company's products.

Decisions relating to expenditure in these asset categories will shape the overall need for funds. Meanwhile, the company will accumulate stock of work in process. Income will start rolling in when goods are produced and if anticipated sales occur. We must remember also that investment in buildings, equipment and machines, termed capital expenditure usually require larger capital outlay and will continue to be used in the operation of the company for several years over which period they will contribute in yielding returns required to recoup the initial investment in them.

In this process of investment and reinvestment, this research would want to find out the type of financing strategy most manufacturing firms preferred as a result of interest rate deregulation within the period under study, Essentially, this research wants to provide explanation to the question: Are manufacturing firms' financing strategies more of the borrowed funds such as bonds (debt) or more of owners' funds (equity) which are held as rights issue, ordinary shares, preference shares, and retained earnings (equity)?

Aman (2011), Okafor (2012), Olowe (2010), Onyekwere (2010) and Shoaib (2012), all noted that manufacturing sector in Nigeria prefers equity financing strategy to debt financing strategy because they want to be free from debt, whereas, Donaldson (2011), Ibenta (2011), Keziah (2010) and Iheanachor (2013) submitted in the contrary, that the Nigerian manufacturing sector prefer debt to equity financing strategy because of the provision of debt servicing before tax and dividend payments.

In other to enlarge the frontier of knowledge, this work seek to expand the period of study (1987 -2013) with five (5) dependent variables (bonds, rights issue,

ordinary shares, preference shares, and retained earnings) compared to the submissions of Igborgbor (2010) whose study period was 1990 to 2012. He used four (4) variables which include bonds, ordinary shares, preference shares, and retained earnings. This research work will provide answers to the questions of where and how manufacturing industries in Nigeria secured funds for maintenance and growth of businesses during the period under study. Put succinctly, what best corporate financing strategies (CFS) (made up of bonds, preference shares, rights issue, retained earnings and ordinary shares) did manufacturing industries find more suitable following interest rate deregulation in Nigeria?

1.3. Objectives of the Study

This study investigates empirically the influence of interest rate deregulation on corporate financial strategies (CFS) of manufacturing industry in Nigeria. Therefore, the specific objectives are as follows:

i) The impact of interest rate deregulation on bonds of manufacturing industry in Nigeria.

ii) The impact of interest rate deregulation on preference shares of manufacturing industry in Nigeria.

iii) The impact of interest rate deregulation on rights issue of manufacturing industry in Nigeria.

iv) The impact of interest rate deregulation on retained earnings of manufacturing industry in Nigeria.

v) The impact of interest rate deregulation on ordinary shares of manufacturing industry in Nigeria.

1.4. Research Questions:

In view of the objectives of this research topic, the research questions are:

i) What are the implications of interest rate deregulation on debentures and bonds of manufacturing industry in Nigeria?

ii) What are the effects of interest rate deregulation on preference shares of manufacturing industry in Nigeria?.

iii) What is the impact of interest rate deregulation on retained earnings of manufacturing industry in Nigeria

iv) What is the impact of interest rate deregulation on rights issue of manufacturing industry in Nigeria of manufacturing industry in Nigeria?

v) What is the impact of interest rate deregulation on ordinary shares of manufacturing industry in Nigeria?

1.5. Research Hypotheses:

The following null hypotheses are hereunder stated as follows:

H_{01}: There is no significant relationship between interest rate deregulation and bonds issue of manufacturing industry in Nigeria.

H_{02}: There is no significant relationship between interest rate deregulation and preference shares by the manufacturing industry in Nigeria.

H_{03}: There is no significant relationship between interest rate deregulation and retained earnings of manufacturing industry in Nigeria.

H_{04}: There is no significant relationship between interest rate deregulation and rights issue of manufacturing industry in Nigeria.

H_{05}: There is no significant relationship between interest rate deregulation and ordinary shares in Nigeria.

1.6. Scope of Study:

The study concentrated on twenty-two (22) manufacturing companies quoted by the Nigeria Stock Exchange, Abuja by convenience method. The companies covered all manufacturing classifications of productivity sectors such as food, beverages and beer, chemicals, drugs, households, etc. The twenty-two (22) companies used as samples for this study are: Vitafoam Nigeria Plc, Unilever Nigeria Plc, UAC Nigeria Plc. PZ Industry Plc, Presco Plc, Nigerian-German Chemical Plc, Nigerian Breweries Plc, Nestle Nigeria Plc, Neimeth Plc, Lifestock Feed Plc, Lafarge Cement WAPCO Plc, Guinness Nigeria Plc, GlaxosmithKline Plc, Flour Mills Nigeria Ltd, First Aluminuim Plc, Dunlop Nigeria Ltd, CCNN Ltd, Cadbury Nig Plc, Beta Glass Plc, Berger Paints Plc, Ashaka Cement Plc and 7-Up Bottling Plc. The source of data included all the annual reports and statements of accounts of the twenty two companies utilized for the study as well as the publications of World Bank, the Central Bank of Nigeria statistical bulletin annual report and statement of accounts of Central Bank of Nigeria.

The work utilized data covering the period 1987-2013 (26 years), thus covering the period of interest rate deregulation. The secondary data were processed using E-view for windows econometric packages 5.0. The work made use of panel data and according to Damodar and Dawn (2011), Ngugi (2011), Chipeta, Wolmarans and Vermaak (2012), this is appropriate because of its ability to combine

the cross sectional and time series data to analyze the dynamics of changes over a period of time and ultimately enhancing the quality of data being analyzed.

1.7. Significance of the Study

The significance of this study is hinged on the knowledge gap it filed up. Firstly, considering the submission on this topic by Igborgbor (2010) whose study period was 1990 to 2005 (15 years), this work will fill knowledge gap by expanding the period of study to cover the post interest rate deregulation period of 1987 to 2013 (26 years). Secondly, in that same work of Igborgbor (2010), four (4) dependent variables was used which include bonds, preference shares, retained earnings and ordinary shares. In this regard, this work is significant in filling knowledge gap by increasing the number of dependent variables to five (5) (addition of rights issue of manufacturing industry) within the period under review. Finally, all the individual tested hypothesis contributed to bridge knowledge gap between the non-market based and market based interest rate period. No doubt, contributions from this study are useful to both theoretical and practical applications as well as the general public who are interested in business activities.

1.8. Limitations of the Study

The study had a lot of limitations, chief amongst them is the fact that policies and conventions employed by a particular company will not necessarily be the same as those used by other companies. Secondly, the smallness of sample size of 22 out of 45 quoted companies was somewhat a challenge. Finally, the data used are mainly secondary data which are most times of doubtful reliability because data

published by private corporations and government in Nigeria has political, economic and social colorations and so are questionable. In all, these limitations did not adversely affect the findings because the researcher ameliorated these limitations by consulting various statements of company accounts to sieve out discrepancies where noted.

1.9. Definition of Terms

Some technical terms have been used in this study. These terms will be defined as used in this work:

i) Interest Rate Deregulation:

Interest rate deregulation refers to a deliberate and systematic removal of regulatory controls and structures and complex operational guidelines in the administration and pricing system of the interest rate.

ii) Corporate Financial Strategies:

Corporate financial strategy refers to the systematic and deliberate plans put in place by manufacturers in choosing a most preferred financing option for their respective firms. However, for the purpose of this study, the considered financing options include bonds, preference shares, ordinary shares, retained earnings and rights issue.

iii) Debentures/Bonds

Debentures/Bond is a document (loan certificate) acknowledging indebtedness to the company. In other words, bonds are loans of a long-term nature.

iv) Preference shares

Preference shares are shares that have fixed rate of dividend to be paid any time profit is made and dividend is declared.

v) Rights issue

Rights issue which is also known as pre-emptive right issue, subscription privilege issue and subscription right issue is a method of raising new share capital by means of an offer to existing share holders, inviting them to subscribe to cash for new shares in proportion to their existing holdings.

vi) **Retained Earnings**

Retained earnings are earnings set aside out of net profits of the firm after all interests and dividends to preference shareholders have been paid.

vii) Ordinary shares

Ordinary shares or equity capital is the traditional form of capital for new business and the base of support for borrowing by existing firms. The holders of this capital are the owners of the business.

1.10: Organization of the Study

The organization of the work highlights the content of each chapter as follows:

Chapter one contains the introduction to the study. It has the overview of the study, statement of the problem, objectives of the study, research questions, research hypotheses, scope of the study, significance of the study, limitations of the study, definitions of terms and organization of the study.

Chapter two generally embodies the review of literature but carefully distilled into the conceptual issues, theoretical issues and empirical issues.

Chapter three contains the research methodology and is subdivided into the introduction, research design, population and sample size, sample techniques, method of data collection, techniques of data analysis, summary and references.

Chapter four highlights the data presentation and analysis. It also has the test of hypotheses, summary and references.

Finally, chapter five deals with discussion of findings, conclusion and recommendation. It also contains the bibliography and appendix.

1.11 Summary

Chapter one, which houses the introductory part of the work vividly accounted for the background of the study, thereby, setting the tune of the research. It also stated the research hypotheses in line with the statement of the problem, the objectives of the study and the research questions. The chapter made bare, the scope of the study and its significance, the limitations of the work and again defined some relevant terms. Finally, Chapter One gave an insight to what holds in other chapters of the study through organization of the work.

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Chapter Two

2.0. Literature Review

2.1 An Overview of the Manufacturing Sector in Nigeria

Abor (2013), Chipeta, Wolmarans and Vermaak (2012) noted that Nigeria as a giant of Africa has for long been regarded as a nation blessed with abundant human and material resources; however, the underutilization of these potentials has amplified a widespread poverty, low standard of living at individual level and rising unemployment in the country as a result of incessant mono-economic practice and drastic neglect of other sectors of the economy such as agriculture, tourism, mining and the manufacturing industry. In spite of the country's vast oil wealth, a recent report from United Nations International Children's Emergency Fund (UNICEF) has shown that majority of Nigerians are poor with 71 per cent of the population living on less than one dollar a day.

The United Nations Human Development Index (2012) and Adekunle (2010) also observed that Nigeria ranks 158 out of 177 countries which is a significant decrease in its human development rank of 151 in 2004; and World Bank Development Indicators (2000) have placed Nigeria within the 20 poorest countries of the world. Hence, Dammom and Senbet (2010), Daniels (2011) and Fluck (2013) stated that the issue of poverty can be easily traced to mono-economic practice and underutilization of the nation's endowed resources, especially in manufacturing sector which could have opened up windows of opportunity in job creation and economic development.

Iyoha and Ekanem (2012), Iheanachor (2013) and Hung (2013) argued that the fastest trend through which a nation can achieve sustainable economic growth and development is neither by the level of its endowed material resources, nor that of its vast human resources, but technological innovation, enterprise development and industrial capacity. No wonder, Keziah (2010),Mazi (2011), Ofuonyebuzor (2012) and Otalor (2012)posited that despite its poor natural resources, and the hurdles it faced from 1920s chronic inflation, Germany has effectively exploited the manufacturing sector and rose up to become the largest economy in Europe and the fourth largest in the world.

This was achieved after the European recovery program instituted in the 1950s by the America's foremost World War II military leader, George Marshall to rebuild the war-shattered Europe. In their opinions, Wallance and Idoti (2013), Ng and Perron (2010), Stiglitz (2011) and Ng and Perron (2013) opined that this ideology largely concentrated on industrial revolution which gave birth to the four-year Marshall economic plan adopted by both French and German governments. Consequently, Jaramillo (2011), Ibenta (2011), Hatanaka (2012) and Ansoff (2010) agreed that these nations have witnessed concrete development in their industrial investments, infrastructural development and significant level of employment generation. Just as America regained its strength and became the world industrial giant through aggressive industrial revolution following the cold war that led to the breakup of former Soviet Union in the 1990s.

According to Anyasi (2011), Asiwe (2013) and Anuku (2010), in the modern world, manufacturing sector is regarded as a basis through which a nation's economic efficiency is determined, measured, compared, classified and ranked.

However, after the discovery of crude oil in Nigeria in the late 1950s, the nation has shifted from its preeminent developing industrial production base and placed heavy weight on crude oil production; not only has this jeopardized its economic activities, but also aggravated the nation's level of unemployment.

Nevertheless, the well-known developed economies have over the years adopted some initial tactical and favourable measures in pursuit of their economic growth and development through massive diversification of their economic resources into manufacturing sector to enhance their Gross Domestic Production (GDP) capacity. Adetifa (2012) and Ayodogan (2011) submitted that these measures have paved way not only for employment opportunities, but also raising standard of living at individual level that a developing world like Nigeria can exploit to attain a balanced economic growth and development.

Fry (2010), Forage (2010), Girdy (2010) and Hite (2012) stated that creating an enabling environment is an imperative for Nigeria to attract and sustain both local and foreign investors for industrial and commercial activities in the country. This refers to effective national policies, laws, physical infrastructure (road, electricity, water, healthcare, etc.) and other infrastructure (access to education, banks etc.) that need to be put in place for people to be able to use Information Communication Technologies (ICTs) for economic, commercial and social advantages. For instance, the United Arab Emirate (UAE) has been able to put in place the industrial enabling environment to pull both local and foreign investors through whom it has recorded a remarkable development in its economic activities. Thus, Godley (2013), Hamilton (2010), Guy (2013), Igborgbor (2010) and Lintner (2012) submitted that following this trend, Dubai became the largest economy in UAE after Abu Dhabi.

Of course, it is not in doubt that Nigeria is identified among other African nations with vast material and human resources that could help to drive series of manufacturing industries. However, the country still lags behind. For instance, Sargan and Alot (2012), Sargan and Alot (2010) Schwert (2011), and Siddiqui (2012) noted that Canada majors in wood production and contributes 10% to the global forestry product for it has recorded more than 75% (23.5 million hectare) landscape for forest production. Consequently, the country has put in place effective Forest Protection Laws backing forest harvest in the country. Through forest production, Canada has been able to save about 3 million jobs in the last 5 years. Consider in this case, the death of Jebba Paper Mill which would have paved way for employment opportunities in Nigeria.

According to Shaw (2012), Serven (2012), Usman (2011) and Stock (2011), stable power supply is another factor which largely determines the presence and development of manufacturing sector in any developed economy. Regular power supply has marked the basis for the increasing level of intensive capital production among the G8 economies such as West Germany, France, Italy, Japan, United Kingdom, United States, Russia and Canada. Ghana has followed same trend and ends up attracting most of foreign Manufacturers such as Nigeria Dunlop Ltd which vacated Nigeria due to irregular power supply. Also, Tsangyaae (2011) and Sundararajan (2010) posited that about 90% of the Textile Industries previously operating in the country have relocated to other countries in search of regular power supply. This has caused the nation millions of job opportunities and capital flight.

This wholesome development has not only discouraged investors at both local and international levels, but also driven away the existing manufacturing industries.

Nigeria electricity generation which presently stands at 3, 800 Mega Watts cannot sustain all the nation's energy needs. Recently, the Nigeria Energy Commission (NEC) reported that the manufacturing sector alone will consume about 2000 Mega Watts of electricity to keep the factories in the country running at installed capacity. Therefore, Singh and Hamid (2011) and Simerly (2010) stated that the country remains the worst hit by the dwindling power supply which has led to the near total collapse of the entire industrial sector. Nigeria needs a critical reform in power sector to attain economic growth and development.

The collaborated effort of the South Africa Department of Minerals and Energy, and an Independent Power Producers, Eskom towards implementation of 2008 South Africa Response to National Electricity Shortage Policy has generated a fast-tracking electricity projects which has reinforced the nation's industrial sector.

According to Donaldson (2011), Duke (2011), Dujey (2013) and Deley (2013), some developed economies have focused on security of lives and property in pursuit of sustainable growth and development. Just as United Kingdom has hitherto put in place effective security scheme and constant review of its National Security Strategy that draws both local and foreign capitals, Nigeria can follow same trend and put in place workable security strategy that will secure the investors' lives and property in the country.

Folley (2011), Eugene (2010) and Diogor (2011) stated that Nigeria has demonstrated a lukewarm attitude towards Research and Development sector despite a number of R & D institutes including universities and polytechnics in the country. However, these institutions are poorly funded; as it is evident that the nation's annual estimation provides little percentage for the R & D sector of the

economy. Science and technology research has been found to be important since it plays an integral role in the creation of new knowledge and skills as well as driving the world economy. Notable advanced nations like United States places more emphasis on R & D as it allocated about 64.8% to R & D in 2010 fiscal year.

According to Harris (2012), and HegwoodGraham and Harvey(2011), Nigeria needs a considerable review of its tax policies also which must be done to catalyse investment and commercial activities from both local and international directions as well as discouraging importation of goods, especially the basic needs for which the country has production capacity. The Nigerian Company Income Tax Act (CITA) of 1961 amended in the year 2007 mandates a deduction of 30% tax rate on a Company annual profit for the assessment year. Consider the comatose level of infrastructural facilities in the country; this percentage would become a burden on some industries, as they might lack the capacity to dutifully observe their tax obligation at regular period. For instance, Russia is identified among the G8 economies for it has placed an enabling environment and favourable Industrial Tax rates between 20% and 24% on manufacturing sector.

Furthermore, Makina and Negash (2012), King (2011) and Linpid (2010), observed that tax can be used as a weapon to discourage the ongoing massive level of importation in the economy. For instance, the Central Bank of Nigeria (CBN) reported that Nigeria has spent N155bn on rice importation in 2010. This awful phenomenon has called for a question as why should Nigeria be a major importer of rice as it is blessed with good climate and resources to produce the commodity locally. The consistent massive importation has indirectly reduced the nation's Foreign Reserve from $46 billion to $33 billion in 2009 and 2010 respectively.

According to Miller (2011), Meziane (2007) and Lyon (2011) there is now, a compelling need for the review and full implementation of the Nigerian Industrial Policy of 1977 which aimed at encouraging and advancing the interest of Nigerians and enhancing their full participation in the control and management of business activities in the country; as various forms of abuses and shortcomings in the implementation of this Policy have prevented the full realisation of its noble objectives. It has been reported that the foreigners still connive with Nigerians to fake business ownership in the country. Consequently, Nigerians have little control over industrial enterprises.

According to Myer (2010), Malcolm (2012) and McKinnon (2010), Nigeria can learn from the French government which has put in place favourable industrial policy that has over the years helped to protect its citizens participation in the national enterprises development towards the international competitive advantage. Following this trend, the country has attained the fifth position among the world largest and wealthiest economies, and second largest economy in Europe.

Onyekwere (2010) submitted that Nigeria consists of 36 states with vast mineral resources such as Coal, Tin Ore, Glass sand, Quartz in Cross River; Zinc Ore, Lime stone, Salt in Ebonyi; Iron Ore, Gemstone, Limenite in Bauchi; Petroleum, Copper, Gold, Marble in Edo; Silica sand, Mica, gypsum in Ogun; among others. In fact, Nigeria has proven deposit of over 1.5 billion tons of Coal, but this has yielded no concrete development for the country as they are transformed only by means of modern technology which the country presently cannot provide.

Obute, Adyorough and Itido (2012) and Ngugi (2011) suggested that another way Nigeria can exert a pull on manufacturing sector with a considerable

employment opportunities is recycling production. It has been argued that each household produces around one ton of rubbish every year, which equates to around 29.1 million tons for the United Kingdom each year. Waste materials have for long posed series of environmental challenges to Nigeria. United Kingdom has seen waste management as an opportunity for recycling activities and employment generation. Nigeria can take advantage of its environmental conditions and develop a workable recycling system to enhance capacity building. This will automatically resolve both environmental pollution and unemployment in the country

Oke (2011), Olowe (2010) and Okafor (2012) had reported a decline in the growth of the manufacturing sector in Nigeria and other developing countries. It stressed that manufacturing output in these countries dropped to the lowest level since the beginning of 2011.

According to Perron and Ng (2012), Omorogie and Erah (2010) and Njoseh (2011), while the manufacturing industry in developing economies largely resisted the effects of financial volatility during the recession of 2008–2009, the ongoing second recession of the world economy since 2010 has equally affected both industrialised and developing countries. It predicted that the growth of manufacturing value added (MVA) in developing countries will slow further to 4.5 per cent in 2012, down from 5.4 per cent in 2011.

In their view, Said and Dickey (2011), Pintock (2010) and Phillips (2013) posited that among the industrialised countries, there are positive developments in North America and East Asia as a result of interest rate deregulation. The MVA of North America is expected to grow by 1.7 per cent in 2012, while East Asia's industrial production could grow by 4.1 per cent. However, there are concerns that

the impact of declining MVA in Europe may spill over to these regions. Prolonged instability in the Euro-zone countries has caused negative spill over in other European countries, and manufacturing output has fallen in Croatia, Denmark, the Russian Federation, Sweden, and the United Kingdom. The MVA of European countries as a group is expected to decline by 1.7 per cent in 2012.

The report states that the prolonged crisis in Europe and uncertainty about growth prospects in the US has negatively affected industrial production in developing countries. The decline in demand in external markets has slowed the growth of export-oriented manufacturing industries in many developing countries, and, in some of them, domestic demand, too, has dropped due to the perceived growth uncertainty at the global level.

Onyechie (2010) posited that during the second quarter of 2012, manufacturing growth slowed throughout the developing world. China's growth rate declined to 9.5 per cent compared to 12.7 per cent in the first quarter. Ngugi (2011) noted that Brazil's industrial production dropped by 4.8 per cent, in India, by 0.7 per cent and among other developing economies, manufacturing output also dropped in Argentina, Colombia and Peru. Negative growth was also observed in developing countries in North Africa. In Egypt, manufacturing output fell sharply, by 9.6 per cent, and in Tunisia, by 7.5 per cent. The UNIDO (2011) report also presents growth estimates by manufacturing sector and that due to the decline in demand in industrialised countries, production growth of consumer goods, especially wearing apparel and consumer electronics, have slowed or declined in developing countries.

2.1.2 Bonds as Corporate Financial Strategy

It has long been recognized in the literature that long-term economic growth requires investment. Usually, this takes the form of, but not limited to investment in plant and machinery, the building of an engineering infrastructure and the development of skills for doing things. Such investments in turn require long-term finance. However, according to Odoko (2010), the bulk of finance available in Nigeria has been short-term bank finance. It is for this reason that there has been call for the development of the capital market in Nigeria. Usually, long-term finance obtainable from the capital market takes the form of equity which represents ownership interest in a business and debt, that is, bonds in the form of long-term loans, which may be both private or government securities. Specifically, a bond is a contract that promises to pay fixed schedules of interest in the future in exchange for cash now.

According to Ibenta (2011), a bond is a written promise by a business firm to pay a specific sum of money at a specific date to the bearer or registered holder of the bond. It is a documentary promise issued by a public company or a government and which resembles other promissory notes. Helfert (2012) submitted that a bond constitutes a part of an elaborate contract or agreement between the issuing business firm and the bond holder. The basis of such a contract or agreement rests on the undertakings by the two sides to the agreement. According to Rock (2012), the bondholder undertakes to furnish the business firm with funds and the business firm undertakes to repay the amount of funds borrowed at a specific future date. Secondly, the business firm will make periodic payments of a fixed rate of interest to the holder or the bearer of the bond. The periodic interest is

conceived as the price which the business firm has to pay in order to induce the bond holder to part with his funds for a fairly long time, thereby denying him the alternative uses of these funds.

Lyon (2011) and Fry (2010) noted that the original amount of funds borrowed represents the par value of the bond or the bond principal. The date at which the bond principal falls due for repayment is known as maturity date. A bond is a promise but the content of the agreement known as indenture 'where the terms and conditions of the bond are defined in a greater detail than on the face of the bond itself. The full rights of the bond holders and the covenant of the business firm are contained in this instrument.

There are several studies that considered the economic case for issuing bonds. The conventional macroeconomic argument for issuing some bonds is that bond finance is less expansionary than money finance and that the expansion is sometimes undesirable, (Romer, 2013). On the other hand, the optimal tax case for bonds rests on the possibility that the issuing of bonds induces individuals to shift consumption towards the future to purchase less capital or to supply more labour.

At the microeconomic level, bonds are issued for different reasons. Corporate borrowers use debt markets to obtain working capital and new equipment. Freear (2010) argues that an important reason several firms opt for debt financing is because the owners do not want ownership dilution. Usually, bondholders have no direct control on the business except for various types of indenture provisions in the bond that may constrain the decision making of shareholders. In other words, the owners are more willing to bear the additional cost in terms of interest payable on the loan stock. This position is helped by tax incentives which make such interest tax

deductable. On the other hand, governments including federal, state and local governments use debt markets to acquire funds to finance various public expenditures including infrastructure. The bonds may be in the form of a public issue or through private placement.

It is argued that corporate bond markets with their long-term institutional investors help unleash major forces of savings that can be channelled into important investments in local economic development. A bond market allows a more efficient allocation of savings in that it matches borrowers and savers directly.

There are several factors that affect the success of any bonds issue. Among the prominent factors are the project which the bond is intended to finance, the price or valuation of the bond, the liquidity and yield of the bond. Others are macroeconomic conditions, financing alternatives and market infrastructure components such as trading systems and credit rating agencies.

Most bond issues in Nigeria are project tied bonds. It is usually expected that the project would have been evaluated and considered viable in the sense that it will be able to service the loans raised to execute it. The yield on the bond is expected to be competitive. The problem is that in recent times there has been an inverse yield curve such that short-term interest rates have been higher than the yield on long-dated stocks. As Mishkin (2010) argues very high and variable inflation rates in developing countries has ensured that debt contracts are of very short duration. The more worrisome aspect of the matter is that there is a dearth of information on the yield of the various bonds in the market. The absence of adequate information affects the ability of the investors to assess the viability of the instruments. More recently. With the rise in interest rtes, the cost of raising funds in the capital market

is becoming competitive. According to Ndanusa (2010), the total cost of floatation as percentage of gross proceeds for manufacturing companies ranged from 1.85 percent to 13.52 percent in 2008.

Another factor that has affected the supply of bonds is the high cost of raising funds through this method. Firth (2013) listed some of the costs in the case of debentures to include: underwriting fees, stock exchange fees and printing expenses. He stated that such costs are more expensive than those relating to short-term finance, although short-term finance will probably have to be raised more often. It is also argued that the risk involved with raising long-term finance is that it might only be employed for a short period of time. Another relevant factor in the development of a bonds market is political instability that creates uncertainty in the minds of investors which affects their holdings of both private and government securities. This is particularly important when the participation of international institutional investors is involved.

The bond market in Nigeria as elsewhere can be classified in various ways. Firstly, the bond market consists of government and corporate securities. In this regard, government securities consist of Federal Government Development Stock, the treasury Certificates (TCs), Treasury Bonds (TBs) and the development bonds issued by state and local governments. On the other hand, corporate securities are mainly in the form of debentures or loan stock.

Another classificatory scheme uses time dimension such that the instruments are categorized into medium and long-term bonds. In this sense, the bond market is defined as an organization market for standardized marketable loans with medium to

long-term maturities. The maturity can range from a minimum of 5 years and up to 25 years.

Since 1977, when the then Bendel State Government issued the first loan stock/revenue bond, several other states have accessed the capital market for funds. The bonds have generally been issued for the development of infrastructure such as housing, water, land reclamation and the construction of markets and shopping centres. The exception has been bonds floated by the Kaduna State Government for the setting up of a ginger factory in 1987 and Kachia Food Company Limited in 1993. The value of the bonds have ranged between N15 million raised by the Ogun State Government in 1983 to N3.5 billion raised by Delta State Government in 2000. The Securities and Exchange Commission recently approved the request of the Lagos State Government to raise the sum of N25 billion from the capital market.

Treasury bonds were introduced in 1989 in an attempt to minimize debt service payments that would arise from the policy of interest rate deregulation adopted under the Structural Adjustment Program (SAP). Indeed when the auction system for the floatation of TBs and TCs was to be introduced in November 1989, the Federal Government requested that part of the outstanding short-term securities be converted to fixed interest bonds. Consequently, N20 billion TBs were converted to fixed bonds styled as 5 percent Federal Republic of Nigeria Treasury Bonds 2004 – 15. The bonds which carry a fixed interest rate of 5 percent are wholly held by the Central Bank of Nigeria. A sinking fund was established for the redemption of the bonds. As a result of the large quality of domestic debt outstanding and the ensuing debt service costs, Treasury bond option became attractive to the government. Consequently, fresh issues were made over the years. As at December 31, 2001,

total outstanding treasury bonds amounted to N430.1 billion of various tranches with interest rates of 5 percent and 10 percent and maturities between 5 and 25 years.

The other segment of the bond market is corporate bonds issued by the private sector. The essential features of a corporate bond can be stated as follows: The corporate issuer promises to pay a specified percentage of par values (interest) on designated dates usually twice a year and to repay the principal value of the bond at maturity. As much as possible companies try to meet their obligations as and when due because not to pay either that principal or interest when due constitute legal default and court proceedings can be instituted to enforce the contract. Most corporate bonds are term bonds in the sense that they run for a term of years and then become due and payable. The term may be long or medium. For instance, obligations due in less than 10 years are regarded as medium term. However, most corporate borrowings take the form of bonds due in 20 or 30 years. Usually, bond prices vary with market interest rates and the issuer must be sufficiently credit worthy and sometimes need a credit rating. In the 1970s to the 1990s many firms borrow through this medium. For instance, Guinness Nigeria Plc sourced the sum of N15 million from this market at the rate of 9 percent in 1976. Similarly, Nichemtex raised the sum of N7.7 million in 1985 at the rate of $8\frac{1}{2}$ percent.

Features of Bonds:

Hutchinson (2009) opined that the major characteristics of bonds are as follows:

i) They are promises to pay a specific sum known as principal at a designated date of maturity and to pay a periodic specific rate of interest.

ii) They are made up of various units of identical terms.

iii) The issue of bonds is covered by another agreement known as bond indenture and the bond itself makes a reference to this indenture.

iv) A separate agreement is also entered into between the business firm and a third party known as the trustee. The bond itself makes reference to the trustee. The work of the trustee is to protect the interest of the bond holders.

v) The trustee usually appends a certificate on the bond and this is reflected in the indenture.

vi) A bond can be of various denominations. A bond with a low par value has the advantage of attracting larger market than one with high per value. The former attracts investors from both the middle class and the upper class of the community. The latter attract mostly the upper class.

vii) The business firm's promises are unconditional because it is under obligation to repay the principal at maturity whether it makes profit or not. Similarly, the other obligation to pay interest periodically is mandatory. Failure of the business firm to meet these obligations will compel the creditor to seek legal remedies.

viii) Normally, interest payment is made half-yearly.

ix)

Bond Indenture

Guy (2013) noted that a bond indenture usually contains provisions governing bond issues among which are:

i) Terms of issue under which the amount borrowed is specified, the interest payment is also specified, assignment and registration of the bond are stated as condition for certification.

ii) Provisions relating to property pleaded to secure the bond.

iii) Call features and conversion features which are mentioned in the discretionary clauses of the indenture,

iv) Provisions for the protection of the bondholders, under which these provisions the business firm management is restrained from acts that can harm the interest of the bondholders. The management is therefore, required to:

a) Maintain a certain minimum level of working capital during the life of the bond.

b) Exercise some constrains on capital expenditure.

c) Exercise restraint on cash dividend payment. It may be provided that unless the business firm's earning after tax are thrice as large as the required interest payment, no dividend should be declared.

d) Provide for a sinking fund and the investment of the fund.

e) Stop issue of more or additional bonds.

The aim of these restrictions is to convince the bondholders that the management of the issuing business firm will do everything possible to generate a steady flow of earnings sufficient for the periodic payment of interest on the bonds and for the eventual amortization of the principal at the due date. The observance of all the restrictions by the business firm will undoubtedly help it to maintain a high

operational efficiency and frugality which will in turn enhance not only the earning potentials of the business firm but its savings propensities.

Trustee

As already mentioned, a bond indenture involves three parties the issuing business firm who is the borrower, the bondholder or owner who is the creditor or the lender and the trustee who looks after the interest of the bondholders, like the Board of Directors who protect the interest of the shareholders in a modern business firm. Though the trustee is the agent of the bond holders, he is appointed by the issuing business firm before the bonds are issued. The trustee may be an individual of affluence or a financial institution such as investment banker or investment trust company. The duties of a trustee are many:

i) He certifies the bond issue by ensuring that all necessary legal requirements are fulfilled.

ii) He examines the business firm's property and accounts so as to ensure that the terms and the provisions of the indenture are observed.

iii) He makes sure that the business firm is meeting its tax obligations and it is protecting its property by proper insurance.

iv) He verifies whether the business firm is duly paying the periodic interest and the sinking fund and if there is any default, he has to notify the bondholders and enforce their right to the extent provided for in

Classification of Bonds

Bonds have been classified according to the industry in which the business firm issuing the bond operates or according to the securities or assets pledged for

the bonds. Phillips (2013) submitted that the major classes of bonds found in the bond market include: Government bonds; Corporate bonds; Public utility bonds; Industrial bonds; Real estate bonds; Mortgage bonds; Collateral trust bonds (have a lien on specific securities); Equipment trust bonds; Assumed bonds; (bonds inherited as a result of merger); Joint bonds (bonds given jointly/guaranteed by several companies); Improvement bonds; Consolidated bonds; Income or Adjusted bonds; Participating and profit-sharing bonds; Coupon or Bearer bonds; Short-term bonds; Long-term bonds; Perpetual or Irredeemable bonds; Serial Bonds (bonds of single issue but different maturity dates); Sinking fund bonds (a certain amount of the business firm's earning is put aside for the purpose of meeting its obligations on the bonds); Convertible bonds (bonds are entitled to convert them into other securities at a specified price); Callable bonds (issuing business firm has the right to call for the redemption); etc.

Generally, bonds are more conveniently classified into two large groups and each group is further classified into various sub-classes; hence, we have:

i) Secured bonds; and,

ii) Unsecured bonds.

Apart from the protection afforded by the general propensity and sustained financial strength of the issuing business firm, the holder of secured bonds has another security. This additional security consists of the assets specifically pledged as security for the secured bonds. Those classes of bonds covered by pledge asserts are called secured bonds, while unsecured bonds are not covered by any specific assets of the issuing business firm.

Advantages of Financing the Manufacturing Industry with Bonds

Njoseh (2011) x-rayed the advantages of financing manufacturing industry with bonds as follows:

i) There exist the reservation of corporate control and management for the existing owners even at the point when bonds are used as a means of obtaining funds. At this instance, the existing shareholders continue to retain the control of the issuing business firm business firm even though they reap the benefits accruing from the new bonds. Invariably, most shareholders dislike any dilution of their control over their company and thus view any issue of new shares to outsiders as dilution of their ownership and control of the business firm.

ii) The under-writing cost of bonds is normally lower than the cost of under-writing other securities.

iii) The business firm generates large earnings by using bonds to raise additional capital which increases the earnings capacity of the issuing company to benefit the equity owners.

iv) Interests on bonds are regarded as business expense, and therefore tax deductable. Consequently, the overall tax burden of a business firm is reduced by interest charges of bonds.

v) Bond financing introduces elasticity in the capital structure. Bonds issue allows flexibility especially if the bond indenture has provisions for callable bonds or for convertible debentures. If these provisions are available to the business firm, it makes an advantageous use of them in time of

difficulties. For example, let us assume the capitalization of two companies A and B to be as follows:

	A	B
Ordinary share	N5, 000	N10, 000
10% callable mortgage bond	N4, 000	
12% convertible debentures	N1, 000	
(Convertible into shares)	--------	
Total	N10, 000	N10, 000

If the two companies now face such problems that the only solution lies in re-organization, company B cannot re-organize because of the inelasticity of its capital structure and therefore, will be incapable of solving its problems. Company A can solve its problem by simply calling back its 10% callable mortgage bonds. Calling back the bonds means reliving itself of the debt charges obligation. Similarly, if there is promising prospects for the companies, A will again be better off since the holders of the 12% convertible debenture may be willing to convert them to common stocks.

To succeed, a bond issue must be structured in such a way that:

i) The fund to be realized is tied to a specific viable project.

ii) A very good collateral is provided

iii) A competitive rate and structure of interest is provided; and ,

iv) Parties selected to handle the offer are professionally competent and reputable institution.

In marketing a bond issue, a company could choose between a private placement and a public offer. In a private placement, the bond is directed at target group(s) of investors. In a public offer, the market appeal is to the generality of the investing

public. For that reason, the regulatory authority, Security and Exchange Commission (SEC) and Nigeria Stock Exchange (NSE) impose stiffer regulations to ensure protection of investors.

2.1.3. Preference Shares as Corporate Financial Strategy

Ezirim (2011) observed that preference shares are distinguished from ordinary shares by some inherent preferential rights the former possess over the equity holders in terms of profits distribution during the life of the company and over surplus in the event of winding up. In other words, they receive preferred dividends as well as priority claims over ordinary shareholders. The dividends paid to preference shareholders come out of the profits after tax (PAT) of the company. This has been advanced as one of the reasons it attracts higher cost than borrowed funds. Preferred stock, as it is sometimes called, possesses some features of ordinary shares, especially in relation to the theoretical foundations that they are not supposed to be redeemed or have maturities, having the element of perpetuity. Like ordinary share dividends, preferred dividends come from the PAT of the manufacturing firm. Postponement or non-payment of dividends on both shares would not necessarily amount to the company being liquidated on ground of insolvency. To the extent to which preference shares have some characteristics of common shares and as well some features of debentures, we can refer to them as hybrid securities. Some of the essential features of preference shares are as follows:

i) Preference shareholders are entitled to a dividend of up to a stated maximum amount before any dividend is paid to ordinary shareholders.

This re-emphasizes the superiority of claims in terms of apportionment of earnings.

ii) Dividend rights are often cumulative whereby any arrears are carried forward and are given preference against future profits. In Nigeria, the cumulative preference shares are prevalent. In some cases, preferred dividend rights may be non-cumulative, in which case, if not paid in a given period of time, the dividend lapses.

iii) In the event of liquidation, after discharging the prior claims of creditors and lenders any surplus assets must be applied first to settle preferred stockholders up to the full nominal value. It is only after this that ordinary shareholders are paid.

iv) Notwithstanding the common features with equity, some preference stocks are redeemable while others are not. When redeemable, the preferred stock would have definite maturity date, which makes it more like a debenture. With this feature, at the stated date, the face values of the stocks are repaid to holders. When irredeemable, there is no promise of refunding the face value of stocks at any date prior to winding up. This maintains the perpetuity content relating it more to common shares.

v) Preference shares can be converted into shares on terms agreed between the holders and the company. This convertibility feature makes the preference holders, if the option is taken, to possess rights and status similar to those of the common stockholders. This option is sought usually when a company finds it difficult to pay up the cumulative dividends. However, before such agreements are made to convert, arrears of

preferred dividends ought to be extinguished. It is noteworthy that most preference shares in Nigeria are not convertible.

vi) Preference shares can be participating or non-participating. A participating preference stockholder is entitled to a regular preferred dividend plus a right to participate in the profits of the company with common stockholders. This participation in the profits is limited to stated or agreed proportions. This serves as an incentive for investors to subscribe to the company's preference shares. In this way, the firm expects to raise more money from the public without necessarily diluting its ownership. It is customary to add the convertibility element to participating preference shares. When non-participating, the holders are entitled only to the agreed preference dividend and nothing more.

2.1.4. Rights Issue as Corporate Financial Strategy

According to Ngugi (2011), instead of selling a security issue to new investors, some firms offer the securities first to existing shareholders on a privileged subscription basis. Sometimes, the corporate charter requires that a new issue of common stock or an issue of securities convertible into common shares be offered first to existing shareholders because of their pre-emptive right.

Pre-emptive Rights

Under a pre-emptive right, existing common stockholders have the right to pre-serve their proportionate ownership in the business firm. If the business firm issues additional common stock, they must be given the right to subscribe to the new stock so that they maintain their pro rata interest in the company. You may

own 100 shares of a business firm that decides to make a new company stock offering for the purpose of increasing outstanding shares by 10 percent. If you have a pre-emptive right, you must be given the option to buy 10 additional shares so that you can preserve your proportionate ownership in the company.

Offering through Rights

Okafor (2012) stated that when a company sells securities by privileged subscription, it mails to its stockholders one right for each share of stock held. With a common stock offering, the rights give stockholders the option to purchase additional shares according to the terms of the offering. The terms specify the number of rights required to subscribe for an additional share, the subscription price per share and the expiration date of the offering. The holder of rights has three choices:

i) Exercise them and subscribe for additional shares,

ii) Sell them because they are transferrable, or

iii) Do nothing and let them expire.

Generally, the subscription period runs about three (3) weeks. A stockholder who wishes to buy a share of additional stock but does not have the necessary number of rights may purchase additional rights. If you own 152 shares of stock in a company and the number of rights required to purchase one (1) additional share is five (5), your 152 will allow you to purchase 30 full shares. If you would like to buy the 31st share, you may do so by purchasing an additional three (3) rights.

In a rights offering, the Board of Directors establishes a date of record. Investors who buy the stock prior to that date receive the right to subscribe to the new issue. The stock is said to sell with rights-on through the date of record. After

the date of record, the stock is said to sell ex-rights; that is, the stock is traded without the rights attached. An investor who buys the stock after this date does not receive the right to subscribe to additional stock.

Value of Rights

The market value of a right is a function of the present market price of the stock, the subscription price and the number of rights required to purchase an additional share of stock. Oke (2011) posited that the theoretical market value of one right after the offering is announced but while the stock is still selling rights-on is:

$$R_o = \frac{P_o - S}{N+1} \quad \text{.....(1)}$$

Where:

R_o is the market value of one right when stock is selling rights-on

P_o is the market value of a share of stock selling rights-on

S is the subscription price per share, and;

N is the number of rights required to purchase one share of stock.

If the market price of a stock is N100 per share, the subscription price is N90 a share and it takes four rights to buy an additional share of stock, the theoretical value when the stock is selling rights-on is:

$$R_o = \frac{100-90}{4+1} = N2 \quad \text{..... (2)}$$

Note that the market value of the stock with rights-on contains the value of one right.

Ex-Rights Value

Myer (2010) opined that when the stock goes ex-rights, the market price theoretically declines, for investors no longer receive the right to subscribe to additional shares. The theoretical value of one share when it goes ex-rights is:

$$P_x = \frac{(P_o \ X \ N)+S}{N+1} \text{ ..... (3)}$$

Where:

P_x is the market price of the stock when it goes ex-rights. For our example:

$$P_x = \frac{100 \ X \ 4)+90}{4+1} = N98 \text{ ..... (4)}$$

From this example we see that theoretically, the right does not represent a thing of value to the stockholder. Before the date of record, the stock is worth N100. After the date of record, it is worth N98 a share but he or she realises N2 in value from the right. The decline in market price is offset exactly by the value of the right, so the stockholder does not benefit from the rights offering. The right represents merely a return of capital.

The theoretical value of a right when the stock sells ex-right is:

$$R_x = \frac{P_x - S}{N} \text{ ..... (5)}$$

Where:

$\mathbf{R_x}$ is the market value of one right when the stock is selling ex-rights. If, in our example, the market price of the stock is N98 when it goes ex-right:

$$R_x = \frac{98-90}{4} = \text{N2 ..... (6)}$$

Or the same value as before.

2.1.5. Retained Earnings as Corporate Financial Strategy

Oseji, Iyoha and Ekanem (2012) observed that retained earnings are proceeds set aside out of the net profits of the firms after all interests and dividends to preference shareholders and ordinary shareholders have been paid. In other words, they are ploughed back into the business for considered profitable uses. Retained earnings are regular sources of fund to most firms-proprietorships, partnerships and companies alike- in the sense that the money which could have been distributed to owners as dividends are retained back for the smooth running of the company and as a cushion of safety in times of liquidity crises.

Characteristically, all internally raised funds save a firm all the issuing costs associated with external sources. They are still an integral part of shareholders' fund. In other to justify them, the firm should earn a return on the funds over and above what the shareholders could have earned if they had been distributed as dividends. Thus, this is what Otalor (2012), Pintock (2010) and Usman (2011) described as an opportunity cost to the shareholders, if the firm is unable to meet that rate; it would seem to have an obligation to distribute the retention and reserves to the shareholders for other alternative uses.

Cost of Internally Generated Funds

Otalor (2012) noted that it is definitely misleading to think that internally generated funds are entirely free of costs simply because they are sourced from within the financial unit. The opposite is true. Though certain internal sources avoid all issuing costs peculiar to external fund raising retention of all sorts belong to the owners and to justify them, the economic unit must necessarily earn a return on funds over and above that which the owners could have earned had they been

distributed as dividends. In view of this, there exists an opportunity cost principle underlying the costs of retention. It has been argued that should the economic agent (say a business firm) not be able to meet that rate which the owners could have earned elsewhere, then it is only rational to distribute the retention. This would allow them to improve on their investments and thus their welfare.

Cost Associated with Retained Earnings

Wallance and Idoti (2013) defined the cost of retained earnings (K_s) as the rate of returns required by stockholders on a firm's ordinary share. The costs of debt and preferred share are based on the returns investors require on these securities. Similarly, the cost of ordinary share is based on the rate of return investors require on a company's ordinary share. Retained earnings or reserve can be in two ways:

i) By retaining some of the current year's profit

ii) By issuing new ordinary shares

Equity raised by issuing stock has a somewhat higher cost than equity raised as reserve due to the floatation costs involved with new share issues. We use the symbol K_s to designate the cost of retained earnings and K_e to designate the cost of ordinary share equity raised by issuing new stock or external equity.

The term retained earnings or reserve can be interpreted to mean either the balance sheet 'retained earnings' consisting of all the earnings retained in the business throughout its history or the income statement item 'addition to retained earnings'.

A business firm's management might misguidedly think that retained earnings are 'free' because they represent money that is 'left over' after paying dividends. While it is true that no direct costs are associated with capital raised as retained

earnings, this capital still has a cost. The reason we must assign a cost of capital to retained earnings involves the opportunity cost principle. The firms after tax earnings belong to its ordinary shareholders.

Bondholders are compensated by interest payments and preferred shareholders by preferred dividends. All earnings remaining after interest and preferred dividends belong to the common stockholders and these earnings serve to compensate ordinary shareholders for the use of their capital. Management may pay out earnings in the form of dividends or else retain earnings and invest them in the business. If management decides to retain earnings, there is an opportunity cost involved- ordinary shareholders could have received the earnings as dividends and invested this money in other stocks, in bonds, in real estate or in anything else. Thus, Stock (2011) posited that the firm should earn on its retained earnings at least as much as the stockholders themselves could earn on alternative investments of comparable risk.

What rate of return can stockholders expert to earn on equivalent risk investments? Stocks are normally in equilibrium with expected and required rates of return being equal. If the firm cannot invest retained earnings and earn at least Ks, it should pay these funds to its stockholders and let them invest directly in other assets that do provide this return. Whereas debt and preferred stocks are contractual obligations that have easily determined costs, it is difficult to measure K_s. However, we can recall that if a stock is in equilibrium, then its required rate of return, K_s, must be equal to its expected rate of return, K_e. Further, its required return is equal to a risk-free rate, kR_F plus a risk premium, R_p, whereas the expected

return on a constant growth stock is the stock's dividend yield plus its expected growth rate.

Required rate of return = Expected rate of return

$$\mathbf{K_s = R_F + R_p = \frac{D_I}{P_O} + g + K_e} \quad \text{..... (7)}$$

Therefore, we can estimate K_s either as: $\mathbf{K_s = R_F + R_P}$ **..... (8)**

Or

$$\mathbf{K_e + \frac{D_I}{P_O} + g + K_e} \text{..... (9)}$$

2.1.6. Ordinary shares as Corporate Financial Strategy

According to Onyechie (2010), an equity interest in a company can be said to represent a share of the company's assets and a share of any profits earned on those assets after other claims have been met. The equity shareholders are the owners of the company. They purchase shares commonly called ordinary shares. The money is used by the company to buy assets. The assets are used to earn profits and the assets and profits belong to the ordinary shareholders whether the profits are distributed as dividends or retained in the business. The amount the ordinary shareholders receive varies from year to year depending on the performance of the company, but because they bear the greatest risks, they will naturally expect a higher rate of return than that accruing to other fixed income securities. One way in which an equity interest differs from other type of securities is that it confers on the owner the right of control over the firm through their voting rights. Ordinary shares have nominal or par value which is the value stated in the memorandum and written on the share script. A firm wishing to raise funds through

ordinary shares must satisfy the requirements of the Companies and Allied Matters Decree and SEC listing requirements.

Characteristics of Ordinary Share

Omoregie and Erah (2010) presented the characteristics of ordinary share as follows:

i) The ordinary share must have a nominal value. This is the authorized value assigned to the shares by the company or by the Securities and Exchange Commission (SEC) when the shares were first issued in Nigeria, the nominal values of most shares are N1:00 or 50 kobo.

ii) An ordinary share possesses a separate market value. The market value is the value assigned to the shares by the market, separate from the predetermined nominal value. For quoted companies, this value is determined on the floor of the stock exchange by stockbrokers with due cognizance to the market forces and conditions prevailing in the company.

iii) Ordinary shares are transferable in the sense that owners of the shares can dispose of them to a third party who still retains the same position held by the original shareholder.

iv) At the end of operations, at given times, profits are distributed to shareholders as dividends and part thereof ploughed back into the company for continued operations. If at any time it becomes inconvenient to distribute dividends the shareholders would have to forfeit such income for that period.

v) Shares may be offered at a price equal to their nominal value, i.e. at par, at a price higher than their nominal value- at a premium or at a price less

than their nominal value at a discount. Selling shares at a discount implies that the conditions are not right and usual with the company.

vi) The income of ordinary shareholder is the residual earnings of the company. In which case, the owners of the company are residual recipients whose dividend must be paid only when other claims are already settled.

vii) Ordinary share capital cannot be redeemed by or repaid to the owners. The Companies and Allied Matters Decree prohibits companies from repaying of capital to shareholders. On the stead, owners are entitled to the proceeds of the entire residual assets of the firm in event of liquidation.

2.1.7 Interest Rates and Corporate Finance Link

There is no doubt a theoretical link exists between interest rates and the financial structure of firms. Interest rates operate through their influence on the cost of capital to the investor as well as on returns to various groups of savers. A change in the interest rates affects the debt-equity choice of a firm, the overall cost of capital and real interest rates, and thereby sets in motion a chain of responses influencing the desired level of the capital stock and its productivity as well as the availability of savings and consequent speed of adjustment of the actual capital stock to its desired level.

Bond is important because of the overall cost of capital to investors, which influences fixed investments, their efficiency, and profits can be expressed as a weighted sum of the opportunity cost of bank debt and of equity, with the weights

depending upon the debt-equity ratio. Therefore, the multiplier effects of changes in the cost of bank debt, on the overall cost of capital, depend among other things on the share of debt in investment financing and on the induced adjustment in this share and in the cost of equity. Further, the cost of equity is said to incorporate a risk premium that first falls and then rises as the debt-equity ratio rises. The resulting U-shaped cost of capital has been proved to have far-reaching implications for the effectiveness of interest rate policy (Sundararajan, 2010).

In general, the desired debt level will be positively related to the implicit interest subsidy on credit from the regulated financial markets. Therefore, the direct effects of interest rates on savings and investment can be reinforced or offset by the substantial indirect effects arising from the optimal adjustments in the implicit interest subsidy, and hence induce a fall in the debt-equity ratio.

According to MacKinnon (2010), other channels through which the interest rates influence the financial structure of firms include the neoclassical rental-wage ratio by which higher interest rates raise the relative price of capital and thereby encourage more intensive use of capital and capital labor substitution. In his opinion, Shaw (2012) noted that another channel is the project evaluation mechanism by which higher real interest rates may improve the quality and efficiency of bank credit rationing, thereby weeding out projects that were profitable only with lower interest rates and encouraging those with higher yields.

In his view, Fry (2010) noted that financial deepening directly influences factor productivity through higher real rates of interest is another channel, and finally there is the portfolio choice that diverts savings from low-yielding, self-financed investments to the acquisition of financial assets, through higher yields

(Sundararajan, 2010). From all indications, however, the link between the interest rates and corporate capital structures as well as the pattern of influence of corporate financing strategies on the effectiveness of interest rate policies, warrant attention because of its implication for resource mobilization, production and growth.

According to Adetifa (2012), the purpose of the various finance strategic theories is to clearly examine the effects of relevant structures on the company's cost of capital and consequently owner's wealth. There are those who believe that gearing does not have any serious effect until it reaches a particular level after which it will begin to have effect while others believe and have practically demonstrated it too, that it does not have any effect whatsoever. The various approaches shall be examined under the following headings.

a) The Net Income/Earnings Approach (Ne)
b) The Gross Income/Earnings Per Share Approach (Ge)
c) The Traditional Theories Approach; and,
d) The Franco Modigliani and Milton Miller (MM) Approach.
e) Signaling Theory
f) Trade-Off Theory
g) The Pecking Order Theory
h) Agency Cost Theory

A firm that finances its assets by equity and debt is called a levered firm. On the other hand, a firm that uses no debt and finances its assets entirely by equity is called an unlevered firm.

2.2.0. Theoretical Framework

2.2.1. The Net Income/Earnings Approach

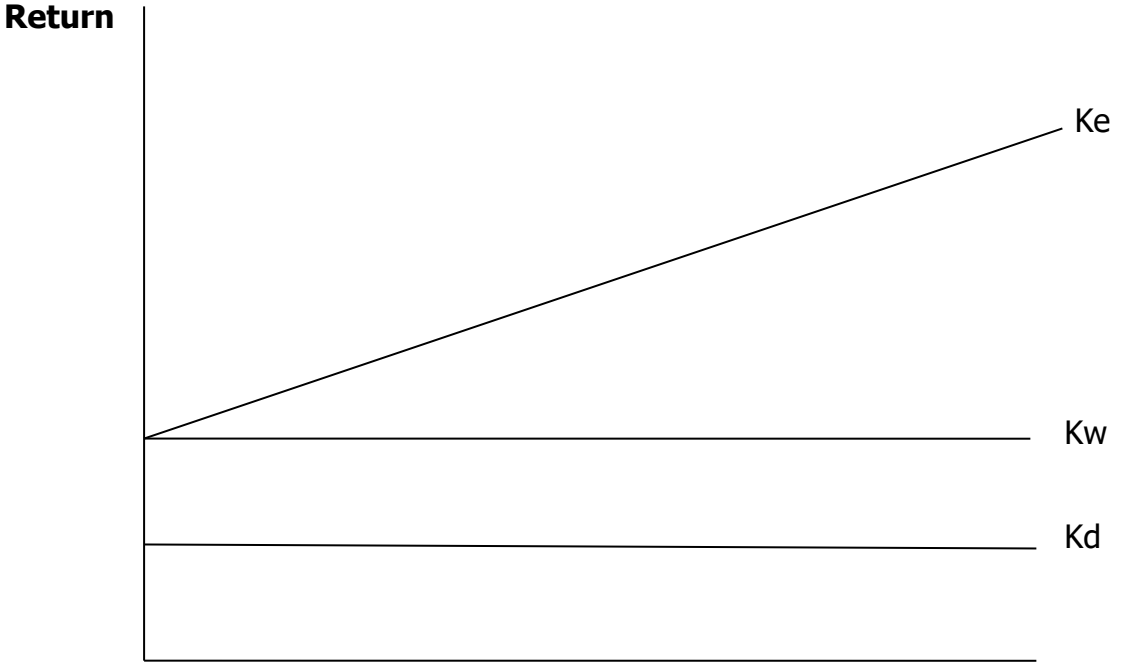


Figure 1: Schematic Illustration of the Net Income/Earnings Approach
Source: Akinsulire (2011). Financial Management 7th Edition.

According to Mazi (2011), net income/earnings approach is of the view that leverage affects the overall cost of capital (K_O) where the overall value of the firm varies with leverage. This school of thought argues that an increase in leverage causes the firm's cost of capital (K_O) to fall and the value of the firm to rise.

The net income/earnings which shall be symbolically represented here by (Ne) is the company's profit after taxation (PAT) and is equal to the returns on equity (Ke).

At a constant rate of return on equities on ordinary shares (Ke) and that of debt capital stock (Kd), increased gearing levels would decrease overall cost of

capital and consequently increase shareholders wealth. This approach makes the following assumptions:

a) There are only two (2) types of capital stock viz ordinary shares and loan stocks or any other debt capital stock having practical and legal implication not different from that of loan stock e.g. debenture stocks.
b) The nominal rate of interest does not change for loan or debenture stock and regardless of the level of gearing, the same goes for the equity shares, i.e. the dividends and market values remain the same regardless of the level of gearing.

The firm's overall cost of capital is the weighted average cost of capital (WACC). It is the weighted average of costs of all the firm's securities which include debt and equity. Symbolically, we can define the weighted average cost of capital as follows:

$$\mathbf{WACC} = \mathbf{KeWe} + \mathbf{KpWp} + \mathbf{KdWd} \quad \ldots\ldots\ldots\ldots\ldots\ldots \quad (10)$$

Where:

W = the weight of each of the classes of the capital structure respectively.

If we have to define the weight, the formula would be restated as follows:

$$\mathbf{WACC} = \mathbf{Ke}\left[\frac{\mathbf{E}}{\mathbf{E+P+D}}\right] + \mathbf{Kp}\left[\frac{\mathbf{P}}{\mathbf{E+P+D}}\right] + \mathbf{Kd}\left[\frac{\mathbf{D}}{\mathbf{E+P+D}}\right] \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (11)$$

Where:

WACC = the weighted average cost of capital

Ke = cost of equity capital stock

P = preference capital stock

Kp = cost of preference capital stock

D = debt capital stock

Kd = cost of debt capital stock

If we equate the weighted average cost of capital (WACC) to the overall cost of capital (Ko), then we may have two (2) types of capital stock i.e. ordinary shares and debenture or loan stocks generally referred to as debt capital stocks. Our formula would change to the following:

$$\mathbf{Ko} = \mathbf{Ke}\left[\frac{\mathbf{E}}{\mathbf{S+D}}\right] + \mathbf{Kd}[\frac{\mathbf{D}}{\mathbf{S+D}}] \quad \text{.....} \qquad (12)$$

We can simplify further by denoting equity (E) with shares (S) and allow (D) to represent debt capital stock while Ke and Kd remain constant respectively and then, our formula would change to the following:

$$\mathbf{Ko} = \mathbf{Ke}\left[\frac{\mathbf{S}}{\mathbf{S+D}}\right] + \mathbf{Kd}[\frac{\mathbf{D}}{\mathbf{S+D}}] \quad \text{.....} \qquad (13)$$

Or

$$\mathbf{Ko} = \mathbf{Ke}\left[\frac{\mathbf{S}}{\mathbf{V}}\right] + \mathbf{Kd}[\frac{\mathbf{D}}{\mathbf{V}}] \quad \text{.....} \qquad (14)$$

Where:

Ko = overall cost of capital

Ke = cost of equity capital stock

Kd = cost of debt capital stock

D = market value debt

S = market value of debt

V = overall market of the firm which is also the market value of shares and the

market value of debts

The above formula can be written as follows:

$$\mathbf{Ko = Ke - (Ke - Kd)D/V} \quad \text{..... (15)}$$

Or

$$\mathbf{Ke = Ko + (Ko - Kd)D/S} \quad \text{..... (16)}$$

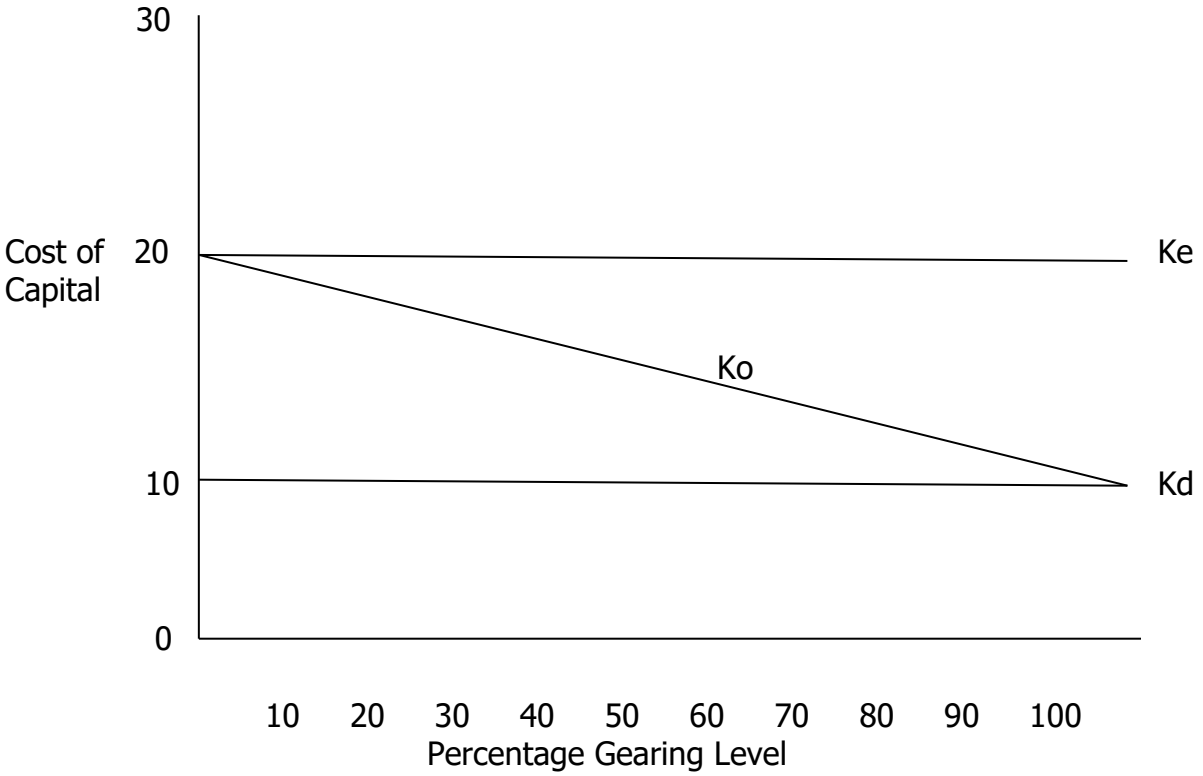


Figure 2: Graphical Illustrations of Increased Gearing under the Net Income/Earnings Approach.

Source: Akinsulire (2011). Financial Management 7th Edition.

Under the net income/earnings approach, if Ke and Kd are held constant, Ko will decrease as more debt capital stock is employed and the value of the firm will continue to rise or vice-versa. This means that the more debt stock employed by a firm, the more the value of the firm.

According to Otalor (2012), under the net income/earnings approach as shown in the Figure 2 above, the following conclusions on the effects of gearing can be drawn:

a) Increased gearing level of capital structure increases the value of the firm.
b) The higher the gearing level, the higher the value per ordinary share and the lower the overall cost of capital. This approach, therefore, posits that a highly geared company will record a higher value for its shares.

2.2.2. The Gross Income/Earnings Per Share Approach

This is a contrast to the net income/earnings per share approach. At a constant cost of debt capital, the cost of equity rises with increased gearing levels, i.e. increased gearing level has no effects on the overall cost of capital, rather, the higher the gearing level, the higher the cost of equity at a constant rate of the cost of debt which means that gearing does not increase shareholders wealth. The gross earnings approach (Ge) measures the overall business risks rather than the financial risk.

The gross earnings approach works under the following assumptions:

i. That the value of a firm's shares is not influenced by the financial risk but the overall business risk.
ii. The firm viewed the whole capital structure as one.
iii. That the cost of debt capital is constant and so is the overall cost of capital and that the advantage brought about by the use of debt is offset by the increase in the cost of equity.
iv. That corporate income tax does not exist.
v. The formula for calculating cost of equity is as follows:

$$\mathbf{Ke} = \frac{\mathbf{Ge-Kd}}{\mathbf{Ve}} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (17)$$

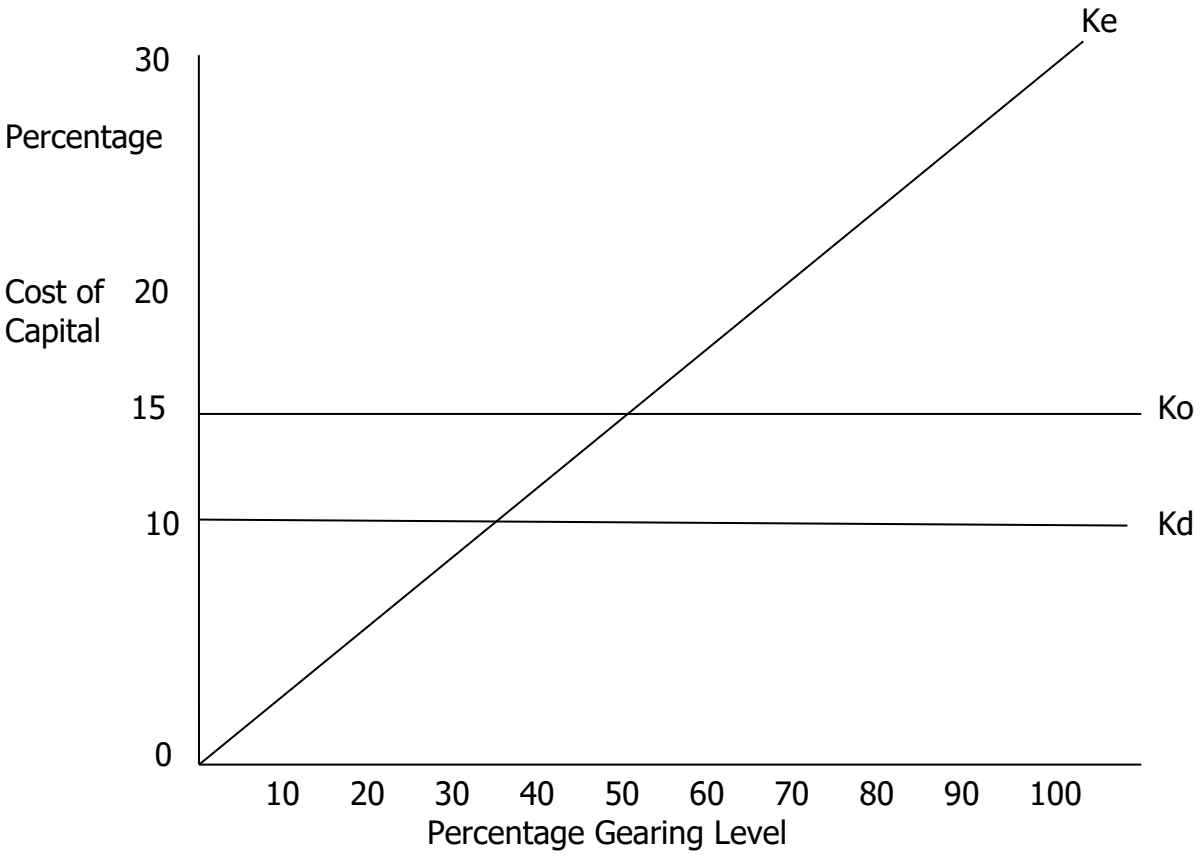


Figure 3: Graphical Illustrations of Gearing under the Gross Income/Earnings Approach.

Source: Akinsulire (2011). Financial Management 7th Edition.

Where:

i. **Ke** = cost of equity

ii. **Ge** = gross earnings

iii. **Kd** = cost of debt

iv. **D** = debt capital stock

v. **Ve** = value of equity shares

The same result will be achieved if we use the formula previously given in equation (16) as:

$$\mathbf{Ke} = \mathbf{Ko} + (\mathbf{Ko} - \mathbf{Kd})\mathbf{D}/\mathbf{S} \quad \textbf{..... (18)}$$

Figure 3 above shows that the value of the firm and the value of the ordinary shares remain unchanged regardless of the gearing levels. It is pertinent to note that the higher the gearing level the higher the cost of equity as against the net earnings (Ne) approach.

2.2.3. The Traditional Approach

There is need to understudy the various assumptions under which the net income/earnings and gross income/earnings approach works. The net income/earnings hold both the cost of debt and equity constant but this may not be practicable in reality in a developing economy like ours.

Adekunle (2010) noted that interest rate plays a significant role in the determination of the market value of bonds and debentures and, therefore, it may not be practicable for the cost of debt to remain constant indefinitely. The cost of equity too may not behave in a fashionable way as posited because there are various factors influencing dividend payout ratio, which is one of the major factors influencing share price behaviour. These reasons may have accounted for the position of the traditionalists in capital structure theories.

The traditional approach takes a position that neither the anti gross income/earnings nor the pro net income/earning approach really defined the optimal capital structure level where the value of the firm's shares is at the maxima. The position of the traditionalists can be summarized as follows:

a) That gearing can actually decrease the overall cost of capital (Ko) and consequently increase the value of its shares, particularly where the cost of debt (Kd) is lower than the cost of equity (Ke).

b) That there is wide range of capital structures, therefore, a firm should maintain its gearing level at the optimal level.
c) That "gearing" increases the overall cost of capital (Ke) and consequently lower the value of the firm when it is maintained beyond the optimal level.
d) That the optimal capital structure level is at that point where the value of the firm's shares is at the maxima.

The traditional approach view supports the relevance of capital structure in determining the value of the firm. According to this view, a judicious mix of debt and equity capital can increase the value of the firm by reducing the weighted average cost of capital (WACC) up to a certain level of debt, (Pandey, 2010). This school of thought sets a limit of financial leverage within which firms can administer debt as a source of capital and within which WACC will continue to decrease. This implied that at the minimum WACC, where the value of the firm is maximized, an optimal capital structure is attained.

Olowe, (2010) described the argument or views of the traditionalist into three stages which is as follows;

i. The cost of equity is assumed to be constant or rise slightly with an increase in debt or leverage. The cost of debt is constant and cheaper than the cost of equity. Because of the cheap cost of debt, the cost of capital falls as leverage increases. The value of the firm will also increase. After reaching a certain degree of leverage, the cost of equity because of added financial risk, will increase in a way that offsets the advantage of cheap debt finance. Within this range or at a specific point, the firm

attains optimum capital structure. This is the optimum value stage as presented by Pandey, (2010)

ii. Beyond a certain limit of leverage, investors perceive a higher degree of financial risks. The increase in cost of equity will more than offset the cheap debt finance. At this level, the weighted average cost of capital will begin to increase as added financial risks results to increased cost of debt at that level of leverage, thereby causing decline in the value of the firm.

The traditional view was criticized in the sense that moderate amount of debt in "sound" firms, not adding very much riskiness to its share, cannot be defended. Also the assumption that investors' perception about risk of leverage been different at different level of leverage cannot be sufficiently justified. Brealey and Myers, (2011) advanced two arguments in support of the traditional view; that it could be that investors do not notice or appreciate the financial risk created by moderate borrowing, but they become alert when debt become excessive. Secondly, actual markets are imperfect and imperfections may allow firms that borrow to provide a valuable service for investors.

The behaviour of the value of the firm, the overall cost of capital (Ko), the cost of equity (Ke) and that of debt (Kd) can be properly translated by simply observing the graph in Figure 4 below and succinctly stating the position of the traditional approach that the use of debt can reduce the overall cost of capital and consequently increase shareholders wealth, although the perception of the investors plays a very paramount role and each would produce different results and positions different from the above.

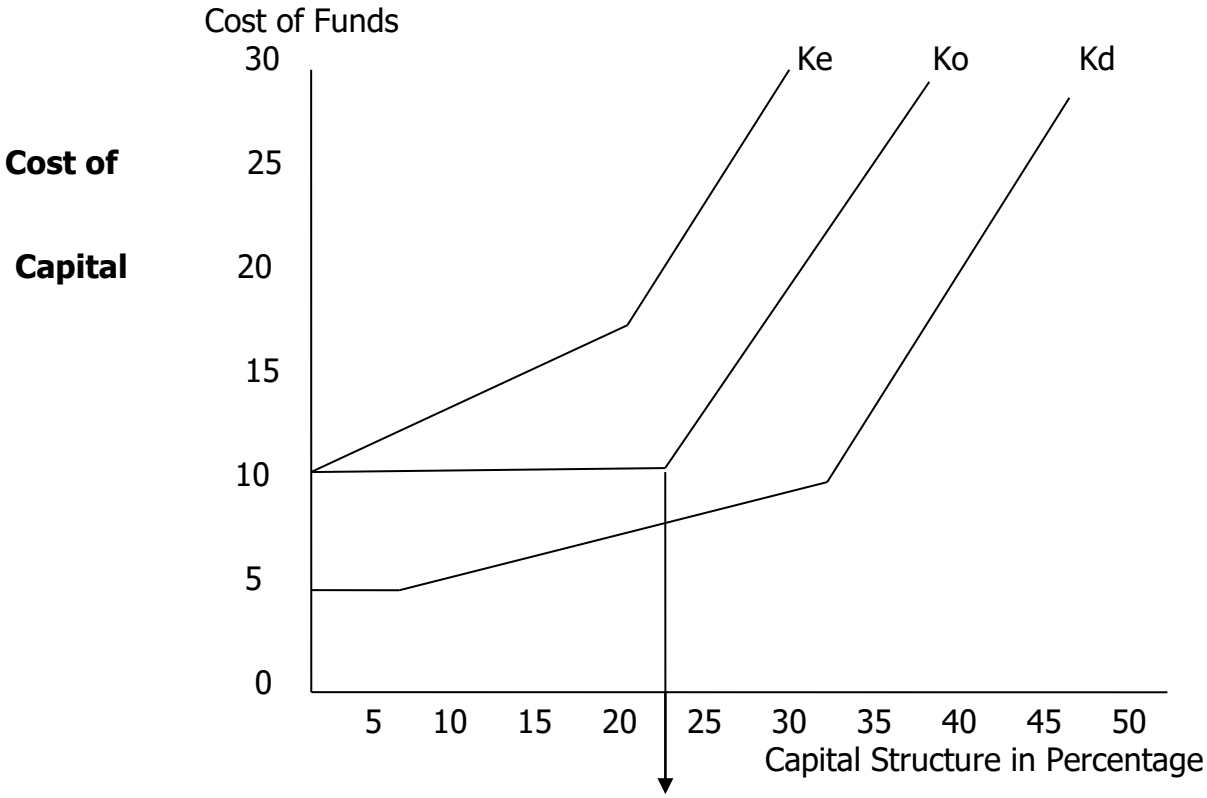


Figure 4: Optimum Capital Structure (Traditional Approach)
Source: Akinsulire (2011). Financial Management 7th Edition.

The use of debt actually causes the overall cost of debt capital to fall and consequently earnings per share to increase. The introduction of further debts causes a general fall in the overall cost of capital while it causes more than marginal increases as more debts are introduced to the effect that the level of owner's wealth also increases but up to a certain level above which it will begin to fall.

The traditional approach can also be graphically presented to show a vivid picture of the behaviour of the cost of funds as we have done for the net and gross income/earning approaches.

The traditional theory, therefore, concludes that debt financing is beneficial to the extent it will maximize shareholders wealth, i.e. that there is an optimal capital structure which occurs at that point where the overall cost of capital is at the minimal and earnings per share is at the maximal.

It should be noted that the rate of cost of equity increases as more debt is introduced. The traditional theory posits that when more debt is introduced, shareholders will also demand for higher returns to offset the effects of the additional financial risks. This in itself will also jack up the cost of equity.

2.2.4. The Franco Modigliani and Milton Miller (MM) Approach

It is popularly referred to as the MM model or hypothesis. Franco Modigliani and Milton Miller developed it in 1958 in their article titled "The Cost of Capital in Corporate Finance and the Theory of Investment". This theory has been severally modified and improved upon. At the first instance, it considers the effects of capital structures on the overall cost of capital of a firm in the absence of corporate and personal income taxes and posits that capital structure has an effect in agreement with our illustration under the gross income/earnings approach.

This theorem forms the basis for modern thinking on optimum capital structure. The basic theorem stated that, in the absence of taxes, bankruptcy costs and asymmetric information and in an efficient market, the value of a firm is unaffected by how the firm is been financed. It does not matter if the firms' capital is raised by issuing stock or selling debt (Myer, 2010). This theorem developed a behavioral justification support for the net operating income/earnings approach.

According to Moyer, McGuigan and Kretlow (2011), Franco Modigliani and Milton Miller (MM) showed that under certain assumptions, a firms' overall cost of capital and its value is independent of capital structure. They assumed the following perfect capital market conditions. "There is no transaction cost for buying and selling securities, a sufficient number of buyers and sellers exist in the market, so no single

investor can have a significant influence on security prices. Relevant information is readily available to all investors and it cost less to obtain. All investors can borrow and lend at the same rate.

MM as cited by Moyer et al (2011), also assumed all investors to be rational, have homogeneous expectation of a firm's earnings and faced with the same business risks (homogenous risk class assumptions). There was also the additional assumption of no income taxes. MM supports their theory by arguing that a process of Arbitrage (switching) prevent equivalent firms from having different market values because of capital structural differences.

The MM approach did not entirely hold a different opinion from that of the net income/earnings (Ne) approach. The theory states that the reduction in the overall cost of capital of a geared firm resulting from its capital structure and the consequent increase in the shareholders wealth would create an arbitrage avenue between the ungeared and geared firms' share prices such that an equilibrium position is struck to make the share prices of the two firms stand at par.

However, like other approaches, it holds on the following assumptions:

a) That there exist a perfect and efficient capital market and those capital market activities attract no transaction cost.
b) That personal leverage can be substituted for that of the forms and vise versa.
c) That firm maintains a 100 percent dividends pay out policy.
d) That the average expected future operating earnings of a firm are represented by a subjective random variable. Therefore, the risk to the

investors can be measured by the variance between the expected and actual return, i.e. it is assumed that the expected value of the probability distributions of expected operating earnings for all future periods are the same as present operating earnings.

e) That firm's risk can be identified and categorized and that firms can be grouped according to the risk's classes.

f) That for the time being, there are no corporate income taxes. Albeit this assumption is relaxed later.

The position of the Modigliani and Miller (MM) approach is akin to the gross income/earnings (Ge) approach that capital structures influence neither the values of the firm nor its overall cost of capital. The MM theory posits that two firms identical in all respects as to earnings except for capital structure cannot command different market values and for this purpose are categorized into two, viz:

a) Ungeared firm (G)

b) Geared firm (L)

1. Fundamentals of the Franco Modigliani and Milton Miller (MM) Theory.

a) To Determine the Total Value of a Firm:

V = (S+D) ..... (19)

= Ne/Kon ..... (20)

Or

Ge/Ko ..... (21)

Where:

V = the total value of the firm

S = market value of the firms shares

D = the market value of debt

y = the expected net operating income (EBIT) or gross income/earning (Ge) or return on capital employed (ROCE) of the firm.

Ko = the overall cost of capital or capitalization rate appropriate to the risk class.

b) To Calculate Overall Cost of Capital (Ko):

$$\mathbf{Ko} = \mathbf{Ke}\left[\frac{\mathbf{S} \div \mathbf{V}}{\mathbf{D} \div \mathbf{V}}\right] + \mathbf{Kd} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots (22)$$

Where:

Ko = Overall cost of capital

Ke = cost of equity

Kd = cost of debt

D = total value of debt

S = total value of shares

We can also use the following formula in calculating cost of equity:

Ko = Ke – (Ke – Kd) (D ÷ V) …… (23)

c) To calculate the Value of Shares of an Ungeared Firm:

Su = Ne ÷ Ke ……. (24) (Value of the shares of an ungeared firm)

Or

Vu = Ne ÷ Ko ……. (25) (Value of an ungeared firm)

Where:

Su = value of the shares of an ungeared firm which is also referred to as Vu.

To Calculate the Value of a Geared Firm:

Vg = Ne ÷ Ko ……. (26)

2. **The Theoretical Application of the Franco Modigliani and Milton Miller (MM) Model.**

The Franco Modigliani and Milton Miller (MM) Model is based on two (2) assumptions viz:

a) That dividend policy is irrelevant and does not necessarily increase the market value of the firm's shares
b) That the higher the debt equity ratio of a geared firm, the higher the expected returns on debt instrument issued by the company.

3. **The Dividend Policy Irrelevance Theory under the Franco Modigliani and Milton Miller (MM) Model.**

Franco Modigliani and Milton Miller (MM) Model's assumption is that the capital structure of a firm has no influence on the value of its shares or on the wealth of the shareholders who in an efficient capital market can substitute their personal or homemade gearing for corporate gearing to create equilibrium as a result of policy switching that may arise out of inherent operational opportunities.

The basis for this argument is that two firms or set of firms with identical capital operational structures should not attract different market values because of their different degree of gearing and that if they do, investors will easily notice it because of the assumption of efficient capital market. Arbitrage will take place to take the benefit of the inherent opportunities such that market pressure will close the gap of the differential market values until a state of market equilibrium is reached between the values of the two firms.

4. The Premium for Geared Risk Relevance of Franco Modigliani and Milton Miller (MM) Theory.

Proposition number 2 by Franco Modigliani and Milton Miller stems from the inherent opportunities under the efficient market of the first proposition. Here, MM assumes that at a constant overall cost of capital, the cost of equity (Ke) increases to compensate the equity holders for the increased level of gearing and thus, the effect of the increased cost of equity offset the inherent benefits of the increased level of gearing. This is not entirely different from the gross income/earnings approach. According to Diogor (2011), in MM's view, as the degree of the financial gearing increases, the equity stock holders become more apprehensive of the risk attached to their securities. The higher the degree of gearing, the higher the chances of loosing their investments in the company to the debt stock holders who has a first charge over the company's assets at any slightest opportunity of liquidation. The ordinary shareholders, therefore, would require a proportionate compensation by way of premium (for this risk) added to the gross income/earnings approach formula for determining the cost of equity as:

$$\mathbf{Ke} = \frac{\mathbf{Ge-Kd}}{\mathbf{S}} \quad \text{..... (27)}$$

Hence, in adding the premium for financial risk as a proportion of the cost of equity, we have:

$$\mathbf{Ke} = \mathbf{Ko} + (\mathbf{Ko} - \mathbf{Kd})\frac{\mathbf{D}}{\mathbf{S}} \quad \text{..... (28)}$$

5 The Effect of Taxation on Gearing Level

According to Iheanechor (2013), there are strong limitations of the hypothesis that a firm's capital structure bears no influence on the wealth of the shareholders based on the critical assumption that Corporate and personal taxes seem an illusion, hence, the assumption was modified to include income taxes.

6 Franco Modigliani and Milton Miller Valuation Model Incorporating Company Taxes

Ibenta (2011) noted that this model was modified to recognize the tax benefits accruing to a company using debt capital because interest on debt is tax deductable. This means that the actual return to shareholders comprises the actual cost paid plus the tax savings on debt interest payment. Should debt capital become a permanent feature to the capital structure, then the tax savings has to be discounted in perpetuity to arrive at the present value of future tax saving flows, thus:

a) Value of an Ungeared Firm Incorporating Taxes:

The after tax value of an ungeared firm is given as:

$$\mathbf{Vu} = \frac{\mathbf{Ne(1-t)}}{\mathbf{Kn}} \quad \text{..... (29)}$$

Where:

Vu = Value of an ungeared firm

Ne = Net incme/earning

T = Rate of company tax

Kn = Cost of equity of an ungeared firm

b) Value of a Geared Firm Incorporating Company Taxes:

For redeemable debt stock, we have: $\mathbf{Vg} = \mathbf{Ne}\left[\frac{\mathbf{I-T}}{\mathbf{Kn}}\right] + \mathbf{D(I+Kd)^{-n}}$ ..... (30)

Or

For irredeemable debt stock, we have: $\mathbf{Vg} = \mathbf{Ne}\left[\frac{\mathbf{I-T}}{\mathbf{Kn}}\right] + \left[\frac{\mathbf{KdTD}}{\mathbf{Kd}}\right]$ ..... (31)

By eliminating Kd which is common to both the numerator and the denominator, we have:

$$\mathbf{Vg} = \mathbf{Ne}\left[\frac{\mathbf{I-T}}{\mathbf{Kn}}\right] + \mathbf{TD} \quad \text{..... (32)}$$

Where:

Vg = Value of a geared firm

Ne = Net income/earning of an ungeared firm

T = Corporate tax rate

Kn = Cost of equity of an ungeared firm

Kd = Cost of debt

D = Debt capital

c) Cost of Capital Incorporating Taxes under the Franco Modigliani and Milton Miller (MM) Model:

In the views of Godley (2013), cost of capital can also be calculated to incorporate company's income taxes under the Franco Modigliani and Milton Miller Model. Such can be calculated by simply recognizing the tax savings effect as we have done under valuation. Thus, the cost of capital of a geared firm will be that of the ungeared firm plus the effect of the tax savings, recognizing the fact that tax savings is a benefit to the company because the aggregate stockholders receive more return for their investment; the implication of which reduces the cost of capital. The higher the debt/equity ratio, the lower the overall cost of capital of a geared company, if tax is incorporated, thus:

$$\mathbf{Kg} = (\mathbf{I} - \mathbf{T})\frac{\mathbf{D}}{\mathbf{V}} \text{ ..... (33)}$$

Where:

Kg = Cost of capital of a geared company

Ku = Cost of capital of an ungeared company

T = Tax rate

D = Value of debt stock

V = Value of the firm.

2.2.5: Signaling Theory

Most models of capital structure study were based on symmetric information which according to Eugene (2010), is the situation in which investors and managers have identical information about the firms' prospects. However, this may not be valid, as managers often have better information than outside investors (asymmetric

information). It is generally accepted that managers, know more about the firms than the outside investors. Based on this premise, Moyer et al (2011), opined that changes in a company's investment, financing, or dividend decision, can represent a signal to investors concerning managements' assessment of the expected future returns, and hence market value of the company. Consequently, when firm issues new securities, such event can be viewed as providing a signal to the financial market place regarding the future prospects of the firm or the future actions planned by the firm's managers.

According to them, general studies of capital structure changes have found that new common equity offerings tend to yield negative stock price responses and new debt offering tend to yield no significant stock price responses. Repurchases of common stock have led to large positive stock returns. Positive stock returns as in their view, were associated with action to decrease leverage.

In conclusion, they suggested that when a firm makes capital structure changes it must be mindful of the potential signal that the proposed transaction would transmit to the market place regarding the firm's current and future earnings prospects and the intentions of the managers.

2.2.6: Trade-Off Theory

According to Ibenta (2011), financial decisions lead to different levels of risk. The higher the level of leverage, the higher the level of risk faced by shareholders and consequently the higher the expected returns of shareholders. The risk-return relationship determines to a great extent, the financial decision of a firm.

Trade-off theory states that there is an advantage to financing with debt (namely, the tax benefit of debt) and that there is a cost of financing with debt (the bankruptcy cost of debt). The marginal benefit of debt financing, decreases with further debt increase, as the marginal cost of debt financing increases.

According to Pandey, (2010) citing Miller, (2007) personal tax on interest income reduces the effectiveness of debt. The other offsetting disadvantages of debt they grouped under financial distress, which arises when a firm is not able to meet its obligations (payment of interest and principal) to debt-holders. As such, financial managers often think of the firm's debt-equity decision as trade-off between interest tax shields and the financial distress. Cost of financial distress include direct cost of insolvency which may be delayed due to conflicting interest of creditors and other stakeholders causing physical condition of assets to deteriorate over time of delay. Other forms of financial distress are indirect cost which relate to the action of employees, customers, suppliers, investors, shareholders and managers. Trade-off theory of capital structure recognizes that target debt ratio may vary from firm to firm. Companies with safe, tangible assets and plenty of taxable income to shield ought to have high target ratios. Unprofitable companies with risky, intangible assets ought to rely primarily on equity financing, (Brealey & Myers, 2011).

This theory explains the behaviour of companies in various ways. It explains many industry differences in capital structure, as high tech growth companies whose assets are risky and mostly intangible for instance, normally use relatively little debt, while airlines on the other hand whose assets are tangible and relatively safe maintains high debt level. Matured companies with high levels of debt usually "go

private" by way of leverage buy-out (LBO- Acquisition of public companies by private investors who finance a large fraction of the purchase price with debt).

The trade-off theory also says that companies with extra ordinary high debt level, which turned out to be too much for the companies to pay down by its internally generated cash, should issue stock, forgo dividend increases or sell off assets to raise cash to rebalance capital structure. On the other hand, trade off theory has no explanation on why some most profitable companies thrive with little debt irrespective of their high credit rating and high corporate income tax. Thus an alternative theory "pecking order theory" explains reason for such inverse relationship.

2.2.7: The Pecking Order Theory

The pecking order theory, explains the reason why profitable firm thrive with low debt ratio. It tries to capture the cost of asymmetric information. It states that companies prioritize their source of financing, (from lateral financing to equity) according to the law of least effort or least assistance, preferring to raise equity as a financing means of last resort.

According to Samuel and Bryshaw, (2012), the pecking order theory proposed by Donaldson (2011) argues against a target debt/equity ratio. It suggests that firms rely for finances as much as they can on internally generated funds. If enough internally generated funds are not available, then debt finance is added and it's only when these two cannot meet the required funds that a company will seek to obtain a new equity. This shows that pecking order theory is in contrast with optimal capital structure.

The preference of internal financing is based on two considerations. First, because of flotation costs of new security issues, internal financing is less costly than external financing. Secondly, internal financing avoids the discipline and monitoring that occurs when new securities are sold publicly (Moyer et al 2011). The first consideration of issue of cost according to Samuel et al, (2012) is somewhat discredited for the following reasons. It assumes companies ignore the full cost of equity capital. It assumes managers are some-worth naïve. There is no issue cost associated with earnings, but this does not mean that funds have zero cost. Retained earnings belong to shareholders, if the funds were returned to shareholders; they could earn a return in them from investing in the market.

Myer (2010) contrary to Moyer et al (2011), suggest asymmetric information as an explanation for healthy reliance on retentions: Rock (2012) in their pioneering work shared that if investors are less well-informed than current firm insiders about the value of the firm's assets, then equity may be mispriced by the market. If firms are required to finance new projects by issuing equity, under pricing may be so secured that new investors capture more than the NPV of the new project, resulting in a net loss to existing shareholders. They went further to assert that, such underinvestment can be avoided if the firm can finance the new project by using a security that is not severely undervalued by the market. Internal funds and / or riskless debt which do not involve undervaluation as stated by them should be preferred to equity by firms in such situation, (Owusu 2011; Oruole 2013; Jonah and Dagash 2010; Anuku 2010; Ansoff 2010 and Bhattacharya 2013).

2.2.8: Agency Cost Theory

In the real world, there also may be conflict of interest among shareholders, debt-holders and management, which brings about agency cost which influences the capital structure of the firm. It is the cost of ensuring that company management acts in the best interest of providers of finance, (Mazi, 2011; Onyechie 2010; Myer 2010 and Samuel et al 2012).

There are three types of agency cost which can explain the relevance of capital structure. These can be classified as below:

a) Assets Substitution Effect:

As leverage increases, management has an incentive to undertake risky projects. This is because if project is successful, shareholders get all the upside, whereas if it is unsuccessful, debt-holders get all the downside. If the project is undertaken, there is a chance of firm's value decreasing and wealth transfer from debt-holders to shareholders, (Fry 2010; Abor 2013; Akintoye 2011; Aman 2011 and King 2011).

b) Underinvestment Problem:

According to Limpid (2013); Ayodagan (2009); Benny (2010); Cardiff (2013) and Daniels (2011), if debt is risky, the gain from the project will accrue to debt-holders rather than shareholders. As such management are discouraged from accepting positive net present value.

c) Free cash flow:

According to Shaw (2012); Chowdbury and Chowdbury (2010); Dammon and Senbet (2010); and Deelon (2012) until free cash flow is given back to investors, management has an incentive to destroy firm value through empire building and perks etc. Leverage, therefore, imposes financial discipline on management. Jensen free cash flow theory asserts that the controlling aspect of debt should induce companies to manage its assets more efficiently by investing in positive NPV projects.

2.2.9 Determination of Interest Rates

According to Anyanwu (2013), various theories of interest rates put together explain or provide variables which determine interest rates. These theories differ because of differences of opinion as to whether interest rates are monetary or real phenomenon. Theseinclude the Keynesian liquidity preference theory of the rate of interest, the Keynesian liquidity preference theory of the rate of interest, the loanable funds by Pigou, the Hicksian IS-LM frameworks and the monetarist frameworks and the monetarist framework of Friedman. These are briefly sketched in turns.

i. The Classical theory of interest

According to Arrow (2011), the classical theory of interest rate is determined by the intersection of the investment-demand-schedule and the saving-schedule i.e., schedule disclosing the relation of investment and saving to the rate of interest. However, no solution is possible because the position of the saving-schedule will vary with the level of real income hence the Keynesian attack of the classical theory

of interest on the ground that it is indeterminate. That is, as income rises, the saving- schedule will shift to the right hence we cannot know what the rate of interest will be unless we already know the income level. But we cannot know the income level without already knowing the rate of interest, since a lower interest rate will mean a larger volume of investment and so, via the multiplier, a higher level of real income. Thus, the classical theory fails to offer a solution. The diagram below illustration the classical position.

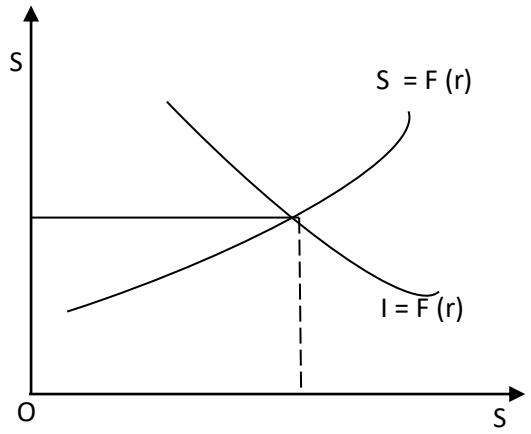


Figure 5: Classical Interest Rate Determination
Source: Anyanwu (1993). Monetary Economics: Theory, Policy and Institutions

ii. The Keynesian Liquidity Preference Theory of the Rate of Interest

According to Allogoskoufis (2012), this theory posits that the rate of interest is determined by the intersection of the supply- schedule of money (perhaps interest inelastic, if rigorously fixed by the monetary authorities) and the demand schedule for money (the liquidity- preference schedule).

However, this analysis is also indeterminate because the liquidity preference schedule will shift up or down with changes in the income level. Thus, money supply and demand- schedule cannot give the rate of interest unless we already know the income level hence, the same criticism of indeterminacy Keynes leveled against the

classics is applicable to his theory. The diagram below illustration the Keynesian position.

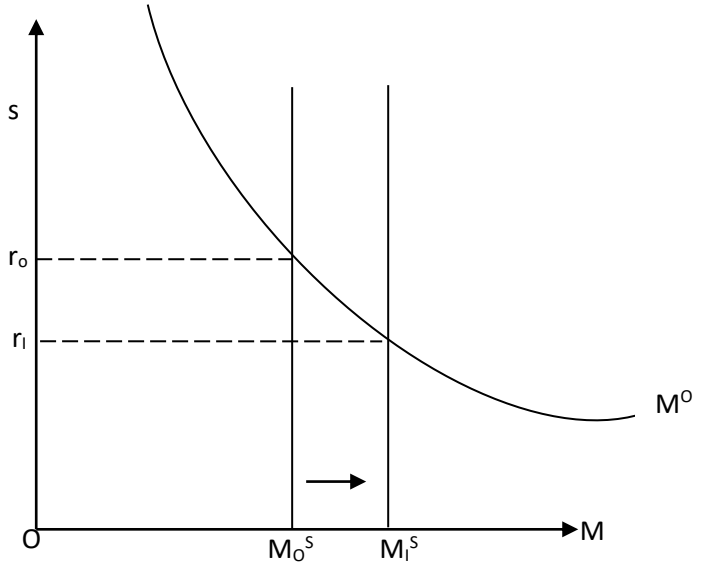


Figure 6: Keynesian interest Rate Determination
Source: Anyanwu (1993). Monetary Economics: Theory, Policy and Institutions

The implication of the Keynesian analysis is that an increase in money supply results in a fall in the interest rate.

iii. **The Loanable Funds Theory of Interest Rate**

According to Archisalo and Lipsey (2011), the loanable funds theory of rate of interest by Robertson (1937), is determined by the intersection of the demand schedule for loanable funds with the supply-schedule. Here, the supply-schedule is a component of saving (in the 'Robertsonian' sense voluntary savings) plus net additions to lonable funds from new money (ΔMs) and the dishoarding of idle balance (ΔDH). However, since the 'savings portion of the schedule varies with the level of disposable income' (i.e 'yesterday's income') it follows that the total supply schedule of loanable funds also varies with income. Therefore, this theory is also indeterminate. The loanable funds position can be illustrated as below.

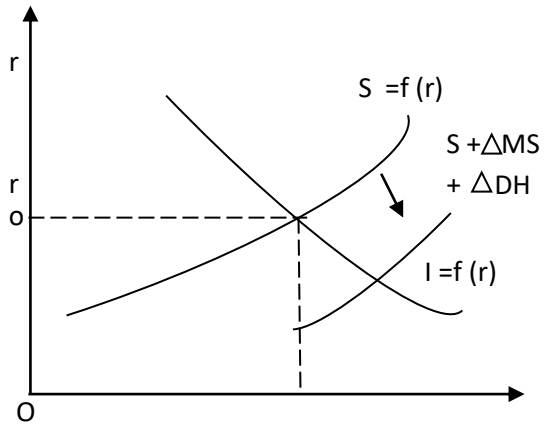


Figure 7: Loanable Funds Theory of Interest
Source: Anyanwu (1993). Monetary Economics: Theory, Policy and Institutions

iv) The Neo-Classical Theory of Interest Rate (Pigouvian Theory)

In the submissions of Anderson (2012) and in the Pigouvian parlance; interest rate is determined by the intersection of the demand-schedule for money with the supply-schedule of savings. Here the relevant supply-schedule is conceive in terms of saving out of current income, i.e. the excess of total income received over income received for service, consumption, and saving, all apply to the same period, however, whether or not current income is fed is past from the injection of new money or from the standpoint of the Pigouvian or neo-classical definition. That is, income whether it springs from the spending of funds borrowed from banks credit played a sole in the process of income creation. Thus in the neo-classical or Pigouvian theory 'saving' is in effect the same thing as loanable funds hence the same criticism applied to them.

v) The Hicksian IS - LM Framework

According to Barro (2013), the Keynesian and the neo-classical propositions taken together supply us with a theory of the interest rate of Hicks (1939). From the Keynesian view point, we get a family of liquidity preference schedule at various

income levels. These together with the supply of money fixed by the monetary authorities, give us the Hicksian LM-curve which tells us what the various rates of interest will be (given the quality of money and the family of liquidity preference curves) at difference levels of income.

On the other hand, the neo-classical formulation provides us a family of saving-schedules at various income levels. These together with the investment demand schedule give us the Hicksian IS-curve, meaning that the neo-classical frame-work tells us what the various levels of income will (give the investment-demand schedule and family of saving-schedule) at different rates of interest.

Thus, the 'IS-Curve' and the 'L M -Curve' refer to functions relating the two variables: income and the rate of interest. Therefore, income and the rate of interest, determined together at the point of intersection of these two curves or schedules. At the point of intersection, income and the rate of interest stand in relation to each other such that

(i) Investment and saving are in equilibrium (i.e actual saving equals desired savings); and,

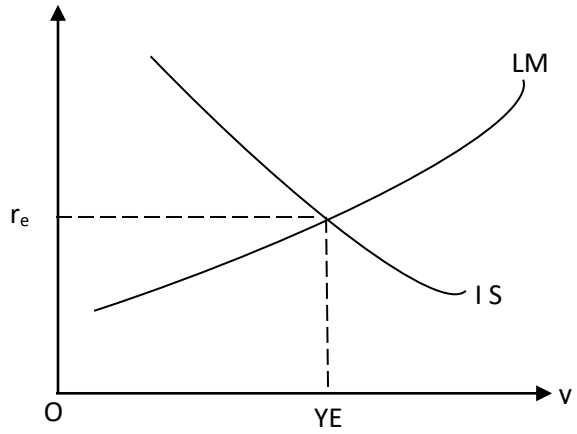


Figure 8: Hicksian IS-LM framework
Source: Anyanwu (1993). Monetary Economics: Theory, Policy and Institutions

(ii) The demand for money is in equilibrium with the supply of money (i.e. the desired amount of money is equal to the actual supply of money). The Hicksian IS-LM framework can be illustrated as follows:

Before looking at the last theory of interest rate, it is important to present here, the formal analysis of the IS-LM framework.

The IS-LM framework of Interest- Rate Determination

Hicks (1939) cited in Anyanwu (2013) combined the neo-classical and Keynsian formulations to develop the IS-LM framework.

IS-LM Framework

According to Anyanwu (2013), the IS-LM framework refers to the locus of all pairs of income and interest rates for which both the expenditure and monetary sectors are simultaneously in equilibrium. If we assume absence of government expenditure, undistributed corporate profits and international trade the analysis will be as follows:

The IS-Curve: The Expenditure Sector

The IS-Cure refers to the locus of pairs of income and interest rate for which the expenditure sector is at equilibrium. According to (Christ 2010), this can be derived from either of two alternative procedures viz:

i) When we assume that income is determined by consumption and investment expenditures:

$$Y = C + 1 \quad \ldots\ldots\ldots\ldots \quad (34)$$

$$C = a + bY \quad \ldots\ldots\ldots\ldots \quad (35)$$

$$I = I_o + I_I Y - I_2 r \quad \text{.....} \quad (36)$$

We then solve for the endogenous variable (Y) in terms of the exogenous (r); i.e.

$$Y = a + bY + I_0 + I_I Y - I_2 r$$

Hence;

$$Y - bY - I_I Y = a + I_0 - I_2 r$$

$$Y(I - b - I_I) = a + I_0 - I_2 r$$

$$\therefore \quad Y = \frac{a + I_0}{I - b - I_I} - \frac{I_2}{I - b - I_I} r \quad \text{.....} \quad (37)$$

This equation (37) expresses the equilibrium level of income as a function of the rate of interest.

(ii) The use of equilibrium condition which is cast in terms of the equality between the desired levels of saving and investment namely:

$$I = S \quad \text{.....} \quad (38)$$

$$S = a + (1 - b)Y \quad \text{.....} \quad (39)$$

$$I = I_o + I_i Y - I_2 r \quad \text{.....} \quad (40)$$

Substituting equations (39) and (40) into the equilibrium condition (38), we obtain:

$$-a + (I - b)Y = I_o + I_I Y - I_2 r$$

Solving the above equation for Y in terms of r, we again derive equation (37)

$$Y = \frac{a + I_0}{I - b - I_I} - \frac{I_2}{I - b - I_I} r$$

This equation provides the level of income at each rate of interest for which the desired levels of saving and investment are in Fig. 9 below is called the IS-Curve. If we introduce government economic activity but assuming a closed economy, we shall have.

$$Y = C + I + G \quad \text{.....} \quad (41)$$

$$C = a + bYd \quad \text{.....} \quad (42)$$

$$I = I_0 + I_I Y - I_I r \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (43)$$

$$Yd = Y - T \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (44)$$

$$T = - t_0 + t_I Y \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (45)$$

where Y_d = disposable income, and T = taxation.

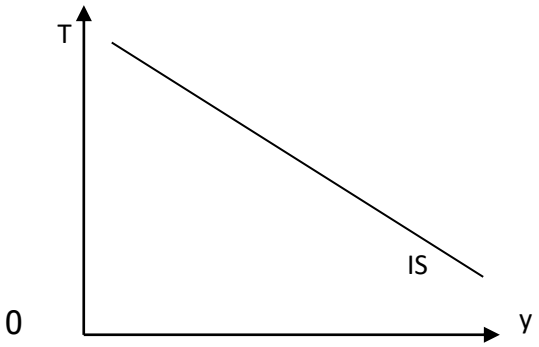


Figure 9: The IS Curve
Source: Anyanwu (1993). Monetary Economics: Theory, Policy and Institutions

Solving for income in terms of the rate of interest and substituting $G = G_0$ autonomous government expenditures, we obtain once more the equation for the IS-Curve.

$$Y = \frac{a + I_0 + bt_0 + a + G_0}{I - b\,(I - t_I) - I_I} - \frac{I_2}{I - b(I - t_I) - I_I} r \quad \ldots\ldots\ldots \quad (46)$$

The LM-Curve: The Monetary Sector

The LM- Curve refers to the locus of all pairs of income and interest rates, for which the monetary sector is at equilibrium or for which the demand for money is equal to its supply, (Cagan, 2010).

This can be derived by considering equations of the money market, (Christ, 2010):

$$\frac{M^d}{P} = m_0 + m_{IY} - m_{2r} \quad \ldots\ldots\ldots\ldots \quad (47)$$

$$\frac{M^d}{P} = \frac{M^s}{P} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (48)$$

substituting (47) into (48) we have

$$\frac{M^d}{P} = m_0 + m_{IY} - m_{2r} \quad \ldots\ldots\ldots\ldots \quad (49)$$

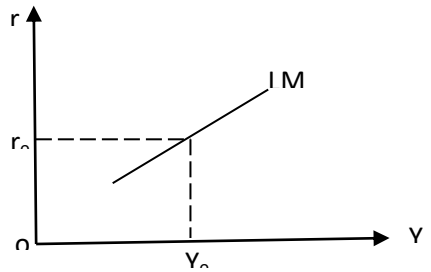
Assuming that the values of the exogenous variables are, say M^s_0 and P_0 the above equation reduces to:

$$\frac{Mo^0}{Po} = m_0 + m_{IY} - m_{2r} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (50)$$

which contains two (2) unknowns, Y and r. solving for r in terms of Y we find:

$$r = \frac{m_0}{m_2} - \frac{M^S_0/P_0}{m_2} + \frac{MI}{m_2} Y \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (51)$$

This equation (51) expresses the equilibrium rate of interest as a function of the level of income and its graph is called LM - curve as shown below:



Firgure 10: LM-Curve: Money-Market Equilibrium
Source: Anyanwu (1993). Monetary Economics: Theory, Policy and Institutions

IS-LM Curves

Given the price level, the above two markets (expenditure and money markets) acting together will simultaneously determine unique equilibrium values for income and the rate of interest. This is done by combining the IS - and the LM-curves so far derived. Thus, the intersection of the IS- and LM-Curve gives the one

pair of values for Y and r at which both sectors are simultaneously in equilibrium for each price level, (Cagan 2010). This is illustrated graphically below:

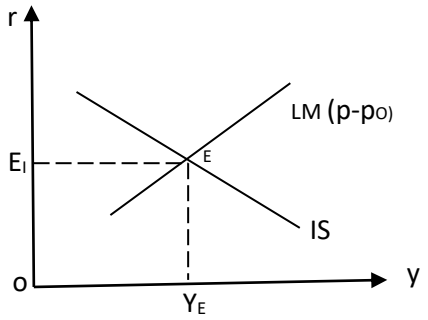


Figure 11: IS-LM Curve General Equilibrium
Source: Anyanwu (1993). Monetary Economics: Theory, Policy and Institutions

The Expenditure and Monetary Sectors Considered Simultaneously:

According to Christ (2005), under a closed economy, the equations of the expenditure in conjunction with those of the monetary sector are:

$$Y = C + I + G \quad \text{.....} \quad (52)$$

$$C = a + bY_d \quad \text{.....} \quad (53)$$

$$I = I_0 + I_I Y - I_I r \quad \text{.....} \quad (54)$$

$$Yd = Y - T \quad \text{.....} \quad (55)$$

$$T = - t_0 + t_I Y \quad \text{.....} \quad (56)$$

$$\frac{M^s}{P} = m_{0 +} m_{IY -} m_{2r} \quad \text{.....} \quad (57)$$

$$\frac{M^d}{P} = \frac{M^s}{P} \quad \text{... ... .} \quad (58)$$

Combining equations (52) and (56) as usual, we obtain:

$$(I-b)(I-t_I)\} Y + I_o r = a + I_o + bt_0 + G \quad \text{.....} \quad (59)$$

(the IS – Curve)

On the other hand, substituting (57) into the equilibrium condition (58) gives us,

$$m_{0 +} m_{IY -} m_{2r =} \frac{M^s}{P}$$

which can be rewritten as

$m_I y - m_2 r = \frac{M^S}{P} - m_0$ ..... (60)

(the LM – Curve)

Pulling equation (57) and (60) together, we form the system:

$(I-b)(I-t_I)\} Y + I_I r = a + I_o + bt_0 + G$

$m_I y - m_2 r = \frac{M^S}{P} - m_0$

To solve the above system we may use the second equation to solve for r in terms of Y; i.e.

$r = \frac{\frac{-M^S}{P} - m_0}{m_2} + \frac{m_I}{m_2} Y$ ..... (61)

Substituting the value of r given by (61) into the first equation of the system, we find:

$\{I-b(I-t_I)\}Y + I_I\left[\frac{m_0\ M^S/P}{m_2} + \frac{m_I}{m_2} Y\right]$

Then solve for the endogenous variable Y in terms of the exogenous variables to obtain:

$r = \frac{1}{I - b\,(I - t_I) + Io\frac{m_I}{m_2}}$

$\left[a + I_o + bt_0 + G - \frac{I_O}{m_2} m_0 + \frac{I_I}{m_2}\frac{M^S}{P}\right]$ ..... (62)

We substitute (61) in (62) to find the corresponding reduced form for the rate of interest. This gives.

$r = \frac{-M^S/P - m_0}{m_2} + \frac{m_I}{m_2} \quad \frac{1}{I - b\,(I - t_I) + I_I \frac{m_I}{m_2}}$

$\left[a + I_o + bt_0 + G - \frac{I_O}{m_2} m_0 + \frac{I_I}{m_2}\frac{M^S}{P}\right]$

Which can be further simplified to read:

$r = \{m_I\,(a + I_o + bt_0 + G)$

$+ (\ I - b(I-t_I)(m_o - M^s/P)$

$+ \{m_2 (I - b\{I-t_I) + I_O m_I/m_2)\}$ .... (63)

vi) The Monetarists' View of Interest Rate Determination

Blinder and Fischer (2011) posited that though the monetarists accept that interest rate is a monetary phenomenon, they reject the Keynesian analysis that it is determined by money supply and money demand. They add and in fact emphasize another factor: the price expectations/anticipations factors.

To the monetarists led by Milton Friedman, an increase in money stock has three major effects: Liquidity effect, income effect and the price expectations/anticipations effect. To them, an increase in money supply initially (immediate observation impact) the interest rate falls, i.e., the Keynesian liquidity preference effect. Due to this increase in liquidity position, people go into the market to increase demand resulting in the expansion of the economy (the income effect).

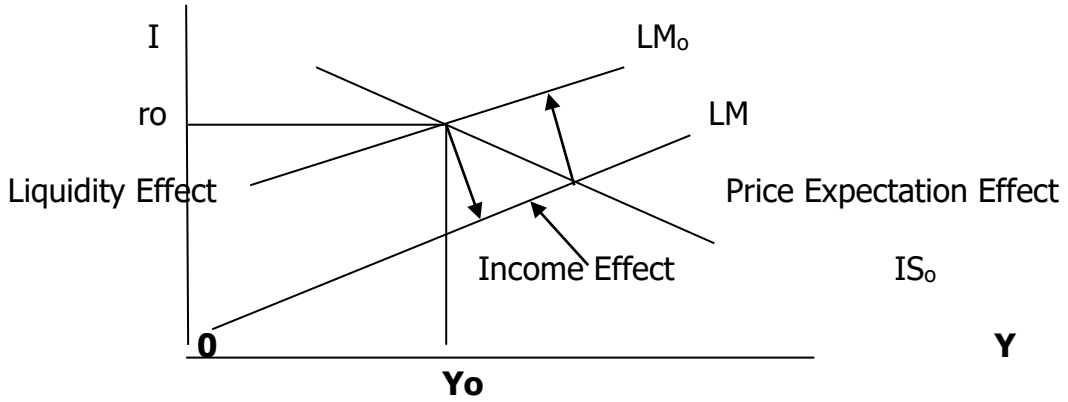


Figure 12: Monetarist's Theory of Interest Rate
Source: Anyanwu (1993). Monetary Economics: Theory, Policy and Institutions

This increase in income will put pressure on goods and services and hence prices will rise. As price increase (due to expectations effect) people will build up an inflationary psychology, i.e, they expect more inflationary effect in future. Suppliers will expand their investment outlet to supply more and this expansionary investment demand

will make price to rise more. Also financial institutions expect price to rise more and, therefore, increase interest rate on their liabilities. Even among consumers, they want to spend more now because they expect higher prices in future hence for durable materials they would demand for more credit and this leads to an increase in interest rate (price expectations/anticipations effect.

Thus, because of these three effects and more so because of the price expectations effect, when money supply is increased the ultimate result is an increase in interest rate rather than the Keynesian decrease in interest rate. This is what Friedman (1976) linked with the Gibson Paradox since prices and interest rates move together from empirical evidence. To them, therefore, interest rate is not only determined by money supply and money demand but also by price expectations factors.

Factors Influencing Interest Rates

According to Batchelor (2012) the following are the factors determining interest rates:

i) The Investment Demand:

The higher the level of investment demand the higher the level of interest rates. On the other hand, the lower the investment demands, the lower the level of interest rates.

ii) The Level of Savings (or conversely the level of consumption):

The higher the level of savings the lower the interest rates while, the lower the level of savings, the higher the level of interest rates.

iii) Demand for Money or the Liquidity Preference:

The higher the money demand, the lower the interest rates while the lower the money demand the higher the interest rates.

iv) The Quantity of Money or Money Supply:

In the Keynesian parlance as we saw in the analysis above, increase in money supply lowers interest rates. But in the monetarist (a la Friedman) world the ultimate result of an increase in money supply is an increase in interest rates.

v) Price Anticipations/Expectations or Inflationary Expectation:

Inflationary expectations increase interest rates since the market rate of interest is made up of real interest rate and the rate of inflation. However, we must note that unexpected changes in the rate of inflation cause the real rate of interest on contracts already drawn up to vary in unexpected ways. An unexpected fall in the inflation rate is beneficial to lenders while an unexpected rise is beneficial to borrowers.

vi) Accumulation of Capital:

A growing stock of capital or increase in capital accumulation tends to lower the interest rate while an fall in capital stock increase the interest rate.

vii) Technical knowledge:

The growth of technical knowledge tends to increase the interest rate. This is because the growth of technical knowledge provides new productive uses for capital.

viii) Time-Preference Term or Duration of Loan Uncertainty:

The length of the period of time that must elapse before a loan is repaid is an important cause of variations in the rate of interest at a particular moment (Hanson,

1974). Thus, the rate of interest differs systematically with the term (or duration) of the loan, for reasons that are ultimately related to uncertainly since the longer the maturity of a loan or investment the riskier (risk premium) it becomes. Therefore, ceteris paribus, the shorter the term of a loan the lower the interest rate while the longer the term of a loan, the higher the interest rate.

ix) The Price of an Income Producing Asset:

The price of perpetuities and bonds vary inversely with the rate of interest. That is, any action of investors that bids up the market price of perpetuities and/or existing bonds means that the rate of interest lenders are prepared to accept has fallen. Also the closer to the present the redemption date of a bond, the less its value changes with a change in the interest rate.

x) Differences in the Cost of Administering Credits:

Generally, the larger the loan and the fewer payments, the less the cost per naira of servicing the loan. Thus, the higher the cost of administering a loan, the higher the interest rate.

xi) Changes in the Demand to Borrow Money:

An increase in the demand to borrow money on the part of households or central authorities increase interest rates while a fall in such demand lowers interest rates.

xii) Changes in Federal Government's Deficit:

Sharp increases in the Federal Government's deficit means an increase in the demand for borrowing by the Federal Government hence interest rates will rise. Therefore, fall in Federal Deficits leads to fall in interest rates.

xiii) The Influence of Central Bank or Monetary Authorities:

The Central Bank often intervenes in the market for bonds in an attempt to influence the yield of those bonds and hence influences interest rates. In fact, by its management of the National debt Government's agent intervenes both in the discount market and the stock (capital) market to influence the short term and long-term rates of interest respectively.

xiv) Bank Administration of Interest Rates through Credit Rationing:

During period of 'tight' money, banks resort to credit rationing thus raising interest rates. The reverse tends to be true during periods of 'easy' money.

2.2.10: What is Term Structure of Interest Rates?

Edwards (2013) noted that term structure of interest rates refers to the relationship between yield to maturity and the length of time until a loan, bond, or other debt securities become due (mature).

Term Structure Theories

Clover (2013), Hickman (2012) and Kantor (2010) hypothesize four major causes of differing term structures; the expectations theory, the liquidity-preference theory, the segmented markets theory, and the preferred habitat theory.

i) The Expectations Theory/Hypothesis

The pure expectations hypothesis argues that investors forecast future levels of the short-term rate and then invest in short-or long-term bonds so as to maximize their return. It assumes that investors have homogenous expectations and can forecast rate with perfect certainty and accuracy. Investors, according to the theory, may trade without transactions, costs, and each selects that security or portfolio of

securities which maximizes his return during the period in which his funds are available for investment. The inventor selects short- and long-term bonds in a sequence to arrive at the highest expected terminal wealth. Short and long-term yield are equated in equilibrium when the actual return on a long-term bond equals the compound returns on an alternative sequence of short-term bonds.

Thus, the yield curve's (a curve which shows yield to maturity as a function of time to maturity) shape is a function of investor predictions of future yields. Thus, if R denotes actual (Market) yield to maturity; r stand for future yields expected by investors; t the post-subscript, the bonds maturity, and the pre-subscript, the time (date) of the yield (it is always the present time); then actual two-years bond yield is equated to the present one-year and the expected one- year yield next year.

$$(I + {}_tR_2)(I + {}_t R_2) = (I + {}_t R_1)(I + {}_t + I\, r_I)$$

i.e. $$(I + {}_tR_2) = (I + {}_tR_2)(I + {}_t + I\, r_I)$$

In general, actual long-term yields can be expressed a as series of shorter-term yields. Thus an n-year bond is equated with one-year bond as follows:

$$(I + {}_tR_n)^n = (I + {}_t R_I)(I + {}_t + I\, r_I)$$

ii) The Liquidity- Preference Theory

This risk premium model, a variant of the expectation hypothesis is of Keynesian inspiration (1930) but articulated largely by Hicks (1930). It asserts that short-term bonds are less risky and, therefore, modifies the expectation by adding a premium to long-term issues. That is, it accepts the view that yields on various maturities are related to each other by the expectations of future long rates, and hence also short rates, but it calls attention to difference in the degree of certainty which attaches to the expected return to be obtained, in the short-term from holding

securities of different length. According to the theory, while the return on short term securities is certain, the return on longer maturities is not guaranteed because of the uncertainty of future rates and hence of the end of period market values of the bond. Thus, in order to induce the market to hold the longer-term maturities (since as risk averters they would prefer shorter-term bonds) supplied by long-term instruments by an expected risk or liquidity premium. In other words, investors desire liquidity, quick convertibility into cash with only a small loss of principal. Thus, they demand a premium yield for longer-term securities. Long term security issuers are willing to pay a premium to avoid frequent refunding, which are costly and risky-refunding requires the replacement of an old debt issue through the sale of a new issue, and by issuing long-term securities borrowers avoid the frequent transactions costs each time a short-term security mature and its refinanced, (Home and McDonald, 2012).

Thus, the actual yield curve will tend to rise more than the cure implied by the pure expectations theory due to the rising risk premium as the term to maturity rises. The size of the risk premiums may be expected to depend on the relative supplies of longer maturities and the strength of investors' risk aversion.

Symbolically, therefore, the actual yield curve is composed of expected future short-term rates and liquidity premium. According to Ogundipe (2010), liquidity premiums are algebraically expressed by adding the term to the basic expectations equation.

$(I +_t R_n)^n = (I +_t R_I)(I +_t +_I r_I + L_2) .... (I +_t +_n - I r_I + L_n)$

iii) Segmented- Markets Theory (Institutionalisms)

This market segmentation hypothesis segments the market by maturity and argues that yields for each maturity are determined by relatively independent supply and demand forces. Institutional investors contend that short, intermediate -, and long-term bond markets are segmented and that both lenders and borrowers have definite preferences for instruments of a specific maturity, and for various reasons, partly due to institutional factors and regulations constraining financial intermediaries will tend to stick to securities of the corresponding maturity, without paying attention to rates of return, on other maturities (Culbertson, 1957 cited in Okun, 2011). Thus, the rates for different terms of maturity tend to be determined, each in its separate market, by their independent supply and demand, schedules. Such rates so set may imply wide differences in the expected return obtainable in the current period, or over some sequence of periods, by investing in different maturities but such difference would not induce traders to move out of their preferred habitat hence the discrepancies become extreme and glaring.

iv Preferred Habit Theory

This theory, posited by Modigliani and Sutch (1966) cited in Siegloff and Groenewold (2012) blend the above three theories. It shares with the Hicksian approach the notion that the yield structure is basically controlled by the principles of the equality of expected returns but modified by the risk premiums. However, this theory differs in the fundamental sense of asserting that different transactions are likely to have different habitats suggested by the segmentation theory resulting in shift of funds, between different maturity markets through speculation and arbitrage. Basically, this theory implies that the spread s(n,t) between the long rate

R(n,t) and the short rate R(I,t) should depend primarily on the expected change in the long rate R^e(n, t). This spread may also be affected by supply of long and short-term securities by primary borrowers (i.e by borrowers other than arbitrageurs) relative to the corresponding demand of primary lenders, to an extent reflecting prevailing risk aversion, transaction costs, and facilities for effective arbitrage operations. Christ (2005) summarized these views in the equations below.

Expected current return on an n period bond

= R (n, t) + Expected capital gains

= R (I, t) + Ft

where F_t is the net effect of relative supply factors and may in principle be positive or negative.

Thus, solving for R(n t) and taking the expected capital gain as proportional to the expected fall in the long rate, i.e to - ΔR^e (n,t) we can also write:

R(n,t) = R (I,t) - Expected capital gain F_t

= R (I,t) +$\beta \Delta R^e$ (n,t) + F_t

2.3. Empirical Issues

Empirically, the cost of capital depends on the debt-equity mix first falling and then rising as the debt ratio rises. Notably, the findings of Sundararajan (2010); Deley (2013); Dujay (2013); Duke (2011); Folley (2011) and Girdy (2010) corroborate the existing peculiar nature of LDCs' financial markets, which are full of imperfections in spite of the deregulation programs. Apart from the interest rates subsidy which is the driving force in the model, this study also takes into consideration other distortions such as agency costs, differential taxation,

bankruptcy, moral hazard, transaction costs and asymmetric information in the analysis of the debt-equity mix of quoted companies in Nigeria.

According to Forage (2010); Givoly (2011); Hamilton (2010); Stock (2011) and Hite (2012), an increase in financial leverage of a firm will reduce the "user cost of capital" and therefore, lead to an increase in the optimal output level of that firm. Although the conclusion of Hite's model implicitly limits the amount of debt financing a given firm can obtain, it nevertheless indirectly reveals that there is a divergence in the cost of internal and external sources of finance to firms; this divergence may therefore affect the efficiency with which investment is allocated.

Makina and Negash (2012); Graham and Harvey (2011); Guy (2013); Igborgbor (2010) and Hund (2010) noted that the cost of equity capital declines following financial liberalization. Consequently, as a result of financial liberalization, financially constrained firms experience a rise in the market value of their equity thereby experiencing a reduction in their average debt ratios.

Chipeta, Wolmarans and Vermaak (2012); Hegwood (2011); Njoseh (2011); Ngugi (2011) and Okafor (2012), stated that retained earnings of the firms declined with interest rate deregulation and was also not significant determinants of investment of the listed firms. According to them, business environment in Nigeria is not encouraging in terms of infrastructure, power, government policies, etc.

The McKinnon-Shaw hypothesis postulates that interest rate deregulation would stimulate growth in any economy given its influence on savings and investment. More so, according to Malcome (2010); Oke (2011); Ng and Perron (2013) and Pintock (2010), the behaviour of interest rates, to a large extent, determines the investment activities and hence economic growth of a country.

Owusu (2011), Wallance and Idoto (2011); Shoaib (2012) and Phillips (2013) and other numerous past empirical studies have supported the positive results regarding the effects of interest rate deregulation on economic growth in Nigeria.

Omole and Falokun (2012); Oseji, Iyoha and Ekanem (2012); Ng and Perron (2013); Said and Dickey (2011), Forage (2010); Givoly (2011); Hamilton (2010); Stock (2011).Hite (2012) and Ofuonyebuzor (2012) observed the impact of interest rate deregulation on the corporate financing strategies of quoted companies in Nigeria. The study discovered via survey that most of the respondents said during the deregulation era the prevailing interest rates were high, and as a result they have had to alter their financial mobilization strategies.

According to Saeedi and Mohamodi (2011); Schwert (2011) and Jonah and Dagash (2010), the very high cost of capital had made firms to depend and rely more on their unshared profits which is subsequently reinvested. This, they explained that firms would prefer to plough back their profits for reinvestment since the cost of capital is prohibitive.

Sundararajan (2010); Siddiqui (2012); Tsangyaae (2011) and Singh and Hamid (2011) examined the linkages among interest rates, bonds, preferred shares of firms, the overall cost of capital, rights issues, ordinary shares and retained earnings in the Korean economy during 1963–81. They used a dynamic framework that recognizes the complex interactions among these variables. According to them, a change in the administered interest rate to a deregulated interest rate, positively affects bonds, preferred shares of firms, the overall cost of capital, rights issues, ordinary shares and retained earnings of firms. This thereby sets in motion a chain of responses influencing the desired level of the capital stock and its profitability, as

well as the availability of savings and retained earnings and the consequent speed of adjustment of the actual capital stock to the desired level.

Further, he asserts that the debt-equity ratio is important because the overall cost of capital to investors–which influences fixed investment, its efficiency and profits–can be expressed as a weighted sum of the opportunity cost of bank debt and that of equity, with the weights depending on the debt-equity ratio.

Therefore, the multiplier effects of changes in the interest rate on the overall cost of capital, and hence on investment incentives and the productivity of capital, depend, among other things, on the share of debt in investment financing and on the induced adjustments in this share, and in the cost of equity. By implication, there exists an optimum debt-equity mix for firms. Consequently, the cost of capital depends on the debt-equity mix first falling and then rising as the debt ratio rises. As a result, the financing and real decisions are no longer independent.

In a model developed for this purpose, Sundararajan (2010) and Stiglitz (2011) derived a precise expression of the desired average debt ratio by postulating that firms strive to obtain the debt-equity mix that minimizes the cost of capital. According to him, the optimal debt-equity ratio can be expressed as:

$$\mathbf{DE^* = d^*(iu,i,II)} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (25)$$

where:

DE* = desired debt-equity ratio

d* = nonlinear function of the interest rate subsidy and the rate of inflation

iu = nominal interest rate in the unregulated market

i = weighted average of domestic and foreign interest rates (adjusted for exchange rate change)

II = rate of inflation

In other words, the larger the interest rate subsidy, the higher the desired debt-equity ratio. Further, the desired ratio will rise or fall with inflation, depending on whether the marginal risk premium falls or rises with inflation (Sundararajan, 2010). The underlying assumption of this specification is that in general the desired debt equity ratio will be positively related to the implicit interest rate subsidy from the regulated financial markets.

The study by Omorogie and Erah (2010) and Keziah (2010) examined the effect of rights issue and ordinary shares on corporate investment and financial leverage of manufacturing industry in Nigeria. The study posits that rights issue encourages existing stockholders to have more faith in such a company since it increases stockholders' wealth. On the other hand, the ordinary shares are highly recommended for raising equity of long term nature as it does not put any form of pressured burden on the issuing company.

Moreover, the cross-sectional analysis of firms with higher investment related tax shields indicates that they need not have lower investment related tax shields unless these firms use the same production technology. Actually, this study emphasizes that there are other factors apart from the Sundararajan's (2010) interest subsidy and the inflation rate that can bring about a change in the financial leverage of a firm. This is also corroborated by Lyon (2011), who emphasized that under a classical corporate income tax, dividends, retained earnings and debt are all treated differently.

However, firms are expected to adopt the form of finance with the lowest tax costs. Bhattacharya (2013), Harris (2012), and Lyon (2011); provided a set of

models, alternatives to M-M theories, grounded in asymmetric information between corporate insiders and outsiders (shareholders or creditors) in which they establish a link among interest rates, financing and investment decisions. They assert that corporate financial behaviour adjusts discretely to changes in earnings as predicted by signaling models (Lintner 2012; Jaramillo 2011). With that, our proposition rests on the assumption that there exists an optimum debt-equity mix for firms in less developed countries (LDCs), especially in view of various market distortions. Earlier on, we had highlighted the theoretical link between interest rates and corporate financing options as a basis for understanding the focus of this study.

By exercising theoretical models, management teams are quite capable of developing optimal capital structure (Simerly and Li 2010). They argue that financial performance of a company is not interrelated to the salary of a manager. Hence, managers prefer huge benefits instead of sharing company profits (dividends) with shareholders. Thus, shareholders are faced with the task of ensuring that managers are working with the target of maximizing firm value. Shareholders are required to look for ways of settling principal-agent problems.

Meziane (2013) explains that two main compensations of debt financing are taxation and discipline. He contends that, interests are paid before tax payments but dividends are paid after taxation, so the cost of debt is significantly less than that of equity. Normally, due to bankruptcy, managers remain cautious and issue a given amount of debt that will not lead the company into problems of default in payment of interest. External equity also has its shortcomings. Although, dividend declaration and payment is not mandatory, it is an incentive to potential investors and may lead

to increase in share price. However, it has the problem of dilution of ownership and principal-agency conflicts.

Based on empirical evidence, options have been made available on how a firm could finance its operations, Asiwe (2013) and Fluck (2013) reveals that the preliminary and following decisions of financing should follow a pattern: companies will float external equity and bonds initially and afterwards, use retained earnings, long term debts and external equity for subsequent financial requirements. Diogor (2011) largely agree with Fluck's assertion but not the order of financing. They recommend that small companies should issue debt first to generate retained earnings and as it accumulates, managers should concurrently obtain both debt and new equity. Meziane (2013) postulates a slightly different view as he submitted that start-ups should be financed with owners' capital, expanding companies with venture capital or private equity while mature companies should use internal financing, more than debt and equity. These options are suggested but managers should choose which one to follow in accordance with prevailing circumstances in their companies.

Another way Nigeria can exert a pull on manufacturing sector with a considerable employment opportunities is recycling production. It has been argued that each household produces around one ton of rubbish every year, which equates to around 29.1 million tons for the United Kingdom each year. Waste materials have for long posed series of environmental challenges to Nigeria. United Kingdom has seen waste management as an opportunity for recycling activities and employment generation. Nigeria can take advantage of its environmental conditions and develop a workable recycling system to enhance capacity building. This will automatically resolve both environmental pollution and unemployment in the country.

2.4. Gaps from Previous Studies

Most of the empirical works that exist show that no study team ever attempted to carry out such a research study spanning twenty (26) years, (1987 – 2013). Secondly, no study of this nature has used up to twenty-two (22) active companies quoted in the Nigerian Stock Exchange Market for research. Thirdly, no research work built a model for predicting changes in corporate financial strategy of manufacturing industries in Nigeria but this present work will do that. Finally, no study of this capacity has used the E-View statistical tool and five models for its regression.

2.5. Summary

Chapter two handled the litereture review. The essence was to make a critical insight into the subject matter with regards to an overview of the study. Essentially, this chapter dived into previous work done on the area under discussion in other to have a firm understanding of the entire research in terms of scope and limitations of previous work. Having gone through the empirical studies, this chapter also took a swipe on the theoretical issues. The purpose here is to allow for the under pinning of the eventual research findings to either agree or disagree with such empirical or theoretical work.

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Chapter Three

3.0. Research Methodology

3.1. Introduction

According to Yomere and Agbonifoh (1999) cited in Esene (2012), methodology in most research works refers to the general strategy followed by the researcher in gathering and analyzing the data necessary for the work. In this regard, this chapter presents the research design, population and sample of the study, method of data collection, technique for data analysis, data estimation procedure and model specification.

3.2. Research Design

The research design is a guide showing how the data or information regarding a research problem is to be collected and analyzed within the research setting and economy of time and materials, (Anyiwe, Idahosa and Ibeh, 2013; Agbonifoh and Yomere (2011); Nkonyeasua (2011) and Olannye (2013).

In view of the above expert positions and in order to achieve the objectives of the study, a number of design options were considered. At the end of it all the ex-post-facto research design was employed. According to Anyiwe, Idahosa and Ibeh (2013) and Agbonofoh and Yomere (2011), ex-post-facto research design is a design for measuring or ascertaining the impact of one variable on another or the relationship between one variable and another. The justification for the use of ex-post-facto research design is the fact that the design is suitable for variables that is

inherently non-manipulable or because its manifestation has already occurred, Agbonofoh and Yomere (2011); Newbold (2012) and Anyiwe, Idahosa Ibeh (2013) and Emanakuku (2010).

In this study, the type of secondary data used is the time series data which has occurred and cannot be manipulated by the researcher since it is taken as given or as published by the World Bank, Central Bank of Nigeria statistical bulletin, annual reports and statement of accounts of Central Bank of Nigeria.

The measurement procedure for this work adopts the E-Views 5.0 and it is justified because the E-Views 5.0 is quite robust, highly effective and technically efficient as noted by Lyon 2011; Harris 2012; Jaramillo 2011; Chris Brooks (2010); Sargan and Alok (2012. 2010).

3.3. Population and Sample Size

The sampling frame which is the list of all the 45 quoted manufacturing companies (cited Jaramillo, 2011) by the Nigerian stock Exchange from 1987 to 2013 makes up the population of study. Thus, the sample size of 22 companies representing 49 percent (chosen by the researcher for the sake of convenience) will be used for the analysis of this study. This sample size of 22 out of 45 companies in the Nigerian manufacturing sector is justified because according to Anyiwe (2013), Agbonofoh and Yomere (2011), Sargan and Alok (2012), Maddala (2012) and Nkonyeasua (2011), the minimum percentage of samples that can be selected out of any given population that is less than a thousand (1000) is 20 percent.

3.4 Sampling Technique

The simple random sampling technique was adopted for the purpose of this research work. According to Anderson, Sweeney and Williams (2013); Olannye (2013), in random sampling technique, the selection method makes it possible for the researcher to estimate the chances that a given element of the population will be selected to be a member of the sample.

In the process of arriving at the sample size, the researcher adopted the lottery method. In this method, the following steps were adopted:

i. A sampling frame which is a comprehensive list of all members of the population made up of the 45 manufacturing companies was constructed.
ii. The researcher then assigned a number to each of the members.
iii. The researcher entered the numbers separately on equal-size paper.
iv. The researcher folded the papers into equal size and placed them in a deep bow.
v. Once all the numbers are in the deep bow, the deep bow is rotated.
vi. The researcher invited a blind-folded assistant who picked a paper from the deep bow, one at a time.
vii. This drawing process was repeated until the desired sample size of twenty-two (22) was obtained.
viii. Finally, those whose numbers corresponded with those picked from the deep bow then constituted the sample.

3.5 Method of Data Collection

For a meaningful analysis, the study used some key financial variables from the balance sheets of the quoted manufacturing companies. To accomplish this, the source of data will include all the annual reports and statements of accounts of the twenty two (22) companies utilized for the study as well as the publications of World Bank, the Central Bank of Nigeria statistical bulletin annual report and statement of accounts of Central Bank of Nigeria. The companies covered all manufacturing classifications from productivity sectors such as food, beverages, chemicals and livestock.

3.6 Techniques for Data Analysis

In order to estimate the regression model, the soft ware used in the analysis is the E-View version 5.0. Chris Brooks (2010) opined that the E-View is encouraged and justified for such time series regression analysis because it is more robust, highly technical and highly efficient. The procedure involves specifying the dependent and independent variables. In this process, we shall obtain the values of constant (slope), coefficient of regression and the error term. In addition, Caner and Kilian (2010) noted that the estimation will show the t-statistic and the p-values for the coefficient which result in either rejecting or accepting the hypothesis at a specific level of significance. The p-value is the probability of getting a result that is at least as extreme as the critical value.

3.7. Data Estimation Procedure

This work used the application of E-View version 5.0 for its estimation procedure. This particular soft ware will adopt the following procedures:

3.7.1. The Ordinary Least Square (OLS)

The OLS is a regression estimate of models to test the relative and global statistics.

a) The Relative Statistics

According to Eliot, Rothenberg and Stock, (2012) this statistic measures:

i. The relationship between or among variables in a model
ii. It tells us the direction of variables between or among dependent and independent variables
iii. It shows the magnitude of the independent variables in relation to the dependent variable, i.e. how a unit change in independent variable can affect quantity change in the dependent variable
iv. It tests the significance of the individual variables especially the independent variables.

b) The Global Statistics

According to Dickey and Fuller (2011) and Hatanaka (2012), this statistic measures:

i. The degree of relationship of association using correlation coefficient (r).
ii. R^2 is used to determine the degree of accuracy of the analysis. It is called the coefficient of determination.

iii. The adjusted R^2 is an important parameter in econometrics because it is used to find out the extent with which the independent variables explain the dependent variable. This is also known as coefficient of variation.

iv. The Durbin-Watson is used to test for first order serial correlation.

v. The F-statistic is used to determine the overall significance of the variables.

c) Decision Rule for Durbin-Watson:

If Durbin-Watson test falls into the rule of the thumb, (between 2.0 and 4.0), then, there is no presence of first order serial correlation. Hence, the variables are significant, (Dickey and Fuller (2010, 2011, 2012); Hamilton 2010). However, if it falls below 2.0, say, 1.5 – 1.9, then, there is weak presence of serial correlation but can be ignored.

d) Decision Rule for F-Statistic

According to Kwiatkowski (2012) the probability associated with the F-statistic (0.0000) is less than the critical values; we accept H_I and conclude that there is statistical significance in the overall parameter.

3.7.2. The Diagnostic Test

This is a test that is widely used in regression to test for normality of the residual (data), serial correlation, heteroskedasticity and stability. The procedures are as follows:

a). Normality Test

This test uses histogram to visualize normality of distribution using the Jarque-Bera approach, (Mac-Kinnon 2010).

b) Test of Hypothesis for Normality:

H_O: The distribution is not normal

c). Decision Rule for Normality Test:

If the probability of the Jarque-Bera statistic is less than critical value, we accept H_I and conclude that it is normal. However, if the probability value of the Jarque-Bera is greater than the critical value, we accept H_o and conclude that the distribution is not normal, (Maddala 2012).

d) Serial Correlation Test

According to Ng and Perron, (2010), serial correlation test uses the Breusch-Godfrey and the Langranger Multiplier tests. It follows the F-statistic.

e). Test of Hypothesis for Serial Correlation

Ho: There is no serial correlation

f) Decision Rule for Serial Correlation Test

Bowerman, O'Connel and Hand (2011). Iyoha and Ekanem (2012); Phillips (2013) posited that the interest here is the probability of the F-statistic. Whenever the probability of F-statistic is greater than the critical value, we accept H_O and conclude that there is no serial correlation, otherwise, we accept H_I and conclude there that is presence of serial correlation.

3.7.3 Granger Causality Test

According to Granger and Newbold (2012) and Emanakuku (2010), granger causality test measures the impact, effect or influence of one variable on the other. Causality test shows the direction of effect and also measures the short and long-run

economic problem(s) so as to enable policy makers know which of the economic policies to be implemented at one point or the other.

The directions in Granger causality are:

a) Unidirectional

b) Bi-Directional

c) Non-Directional

It is unidirectional if one variable is granger causing the other. It is bi-directional if both variables granger causes each other. It is non-direction if none of the variables granger causes each other. If it is unidirectional, it is said to be short term economic problem. If it is bi-directional, it is said to be a long-term economic problem.

a) Test Hypothesis for Granger Causality Test

H_I: P does not Granger cause Q

b) Decision Rule for Granger Causality Test

If the P-values of the F-Statistics is less than the critical value, it implies that P granger causes Q by accepting H_I. However, if the probability of F-Statistics is greater than the critical value, we accept H_O and conclude that P does not granger cause Q. Our interest is in H_I, i.e. (Granger Cause).

3.7.4 Cointegration Test

According to Granger and Newbold (2012) and Emanakuku (2010), to test for cointegration, we must ensure that the variable is stationary. The test procedure to be adopted for the cointegration test is the Johansen-Juselius (JJ) which utilizes two test statistics to determine the number of cointegrating vectors. These are trace and

maximum eigenvalue test statistics. The essence of cointegration is to find out if there is cointegration among variable; to determine the number of cointegrating equation and finally to define normalization of equation.

a) Test of Hypotheses for Cointegration

H_I: There is cointegration among variables

b) Decision Rule for Cointegration

To test for cointegration, we compare the value of likelihood ratio to the critical value at 5 percent. If the likelihood ratio test value is greater than the critical value at 5 percent, Phillips and Perron (2011); Cardiff (2013) and Emanakuku (2010) advised that we accept H_I (which is what is desired) and conclude that there is cointegration among the variables.

3.8. Model Specification

To achieve our objectives of the study, we specified a model which is a process of constructing logical thinking and abstraction of economic reality. The specification of our model is based on the assumption that quoted manufacturing industry in Nigeria usually increases their capital stock through investment in response to potential profit earning opportunities. Therefore, desired investment can be financed in a number of ways, including debentures and bonds, preference shares, rights issue, retained earnings and ordinary shares.

We conducted our empirical analysis by estimating a five (5) single-regression model of an unrestricted interest rate equation of the general interest rate (Int^D) on as the explanatory (independent) variable to which we have bonds (DBs), preference

shares (Prf^s), rights issue (R^i), retained earnings (Ret^e) and ordinary shares (Ord^s) as dependent variables.

The general specifications of our model are:

$DBs = \alpha_0 + \alpha_1 Int^D + U$ ..... (1)

$Prf^s = \alpha_0 + \alpha_1 Int^D + U$ ..... (2)

$R^i = \alpha_0 + \alpha_1 Int^D + U$ ..... (3)

$Ret^e = \alpha_0 + \alpha_1 Int^D + U$ ..... (4)

$Ord^s = \alpha_0 + \alpha_1 Int^D + U$ ..... (5)

Where:

Int^D = Interest Rate

Bs = Bonds

Prf^s = Preference Shares

R^i = Rights Issue

Ret^e = Retained Earnings

Ord^s = Ordinary Shares

α_0 = General Intercept

α_1 = Coefficient

U = Error Term

Apriori Expectations:

DBs, Prf^s, R^i, Ret^e, $Ord^s > 0$

3.9. Summary

This chapter is dedicated to research methodology. It systematically and scientifically presented a detailed order in which the objectives of the study are to be accomplished. The issues discussed include the research design, population and sample size, sample techniques, method of data collection, techniques of data analysis, data estimation procedure, the model specification and finally the apriori expectations. The chapter noted that the soft ware for analysis- the E-View version 5.0 is justified for such multi regression analysis because it is robust, highly technical and highly efficient. The data estimation procedure was presented with much lucidity and purposefulness.

3.10. References

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Chapter Four

4.0. Data Presentation and Analysis

4.1 Introduction

In this study, our empirical investigation consists of three main steps. First, the group unit root of stationary for the eight variables utilized for the study was conducted using the Augmented Dickey Fuller (ADF) test and Phillips-Perron (PP) tests of stationarity (2011).

Second, is the Johansen test of cointegration (1988, 1991); and third is the Ordinary Least Square Regression Analysis for the pooled ordinary least squares (Pooled OLS) panel analytical data.

The use of panel data is appropriate due to its ability to combine the cross sectional and time series nature of data and to analyze the dynamics of changes over a period of time, (Ngugi 2011), which ultimately enhances the quality of data being analyzed (Chipeta, Wolmarans and Vermaak 2012). In order to achieve the objectives of this work, this chapter presents the data in tabular form, data analysis, the test of hypotheses and summary.

4.2 Data Presentation

Table 4.1: Data on 7-Up Bottling Company Plc (N in Millions)

Years	Interest Rate	Bonds Issued	Preference Shares	Rights Issued	Retained Earnings	Ordinary Shares
1987	19.20	385,923	163,991	700,122	385,923	549,914
1988	17.60	349,570	163,991	747,668	349,570	513,561
1989	24.60	313,217	163,991	795,214	313,217	477,208
1990	27.70	276,864	163,991	842,760	276,864	440,855
1991	20.80	240,511	163,991	890,306	240,511	404,502
1992	31.20	204,158	163,991	937,852	204,158	368,149
1993	36.09	167,805	163,991	985,398	167,805	331,796
1994	21.00	131,452	163,991	1,032,944	131,452	295,443
1995	20.79	95,099	163,991	1,080,490	95,099	259,090
1996	20.86	58,746	163,991	1,128,036	58,746	222,737
1997	23.32	12,393	163,991	1,175,582	22,393	186,384
1998	21.34	13,960	163,991	1,223,128	13,960	177,951
1999	27.19	8,313	163,991	1,270,674	50,313	214,304
2000	21.55	86,666	163,991	1,318,220	86,666	250,657
2001	21.34	123,019	163,991	1,365,766	123,019	287,010
2002	30.19	70,127	163,991	2,148,559	710,127	874,118
2003	18.70	852,895	204,989	4,019,786	352,895	557,884
2004	18.36	836,211	204,989	5,025,595	836,211	1,041,20
2005	18.70	881,386	204,989	7,282,981	88,386	293,375
2006	22.51	984,983	204,989	8,098,747	984,983	1,189,972
2007	23.24	2,583,210	256,236	11,240,326	2,583,210	2,839,446
2008	23.29	2,989,021	256,236	14,240,755	2,989,021	3,245,257
2009	20.21	1,669,364	256,236	18,592,815	1,669,364	1,925,600
2010	22.22	24,536,700	256,236	20,528,000	24,536,700	24,792,936
2011	18.23	31,653,400	320,295	22,339,000	31,653,400	31,973,695
2012	18.22	38,178,100	320,295	33,108,400	38,178,100	38,498,395
2013	18.22	38,792,200	320,295	35,451,700	38,792,200	39,112,495

Sources: NSE Annual Reports (Various Issues)

The Table 4.1 on 7-Up Bottling Company Plc above, shows that in 1987 which marked the beginning of the interest rate deregulation, interest rate was 19.20% and rose to 36.09% in 1993 which represents about 88% increase. In the same period, bond issue decreased from initial N385,923 in 1987 to N167,805 in 1993 showing a decrease of about 57%. Observe that investors' choice of preference shares remained stable at N163,991 even up till 2002. The rights issue in 1987 was N700,112 and steadily increased to N985,398 in 1993 representing about 41%. It

can be further observed that retained earnings reduced from N385,923 in 1987 to N167,805 in 1993 representing about 57%. In 1987, ordinary shares was N549,914, but reduced to N331,706 in 1993 representing about 40%. In 1994, interest rate increased from 21% to 30.19% in 2002 representing about 44%. In the same period under review, bonds issued averaged N66,641.67 amounting to about 49% decrease. For rights issued, there was observed increased from N1,032944 in 1994 to N2,148,559 in 2002 representing about 108% increase. For retained earnings, it fluctuated within the period under review but sharply rose to N710,127 at the end of 2002. Ordinary shares plummeted from N295,443 in 1994 to N177,951 in 1998 representing about 40% decrease. However, it rose to N874,118 in 2002 from N214,304 in 1999 which is about 308% increase. As at 2013, interest rate has fell down to 18.22% while preference shares has hit N320,295 in the same year 2013 from N204,989 in 2003 representing about 56% increase. Rights issued also increased from N4,019,786 in 2003 to N35,451,700 in 2013 representing 782%. These observations imply that with the prevailing interest rate investors preferred financing their business through preference shares and rights issue and were not willing to fully adopt debt financing through bonds issued for their businesses.

Table 4.2: Data on Ashaka Cement Company Plc (N Million)

Years	Interest Rate	Bonds Issued	Preference Shares	Rights Issued	Retained Earnings	Ordinary Shares
1987	19.20	978,601	438,750	3,578,771	978,601	1,417,351
1988	17.60	524,631	438,750	3,237,877	524,631	963,381
1989	24.60	570,661	438,750	2,896,983	570,661	1,009,411
1990	27.70	616,689	438,750	2,556,089	616,689	1,055,439
1991	20.80	412,719	438,750	2,215,195	412,719	851,469
1992	31.20	208,749	438,750	1,874,301	208,749	647,499
1993	36.09	2,201,159	438,750	1,533,407	2,201,159	2,639,909
1994	21.00	1,951,561	438,750	1,192,513	1,951,561	2,390,311
1995	20.79	1,701,962	438,750	851,619	1,701,962	2,140,712
1996	20.86	1,452,364	438,750	510,725	1,452,364	1,891,114

1997	23.32	1,202,766	438,750	169,831	1,202,766	1,641,516
1998	21.34	953,167	438,750	171,063	953,167	1,391,917
1999	27.19	703,569	438,750	511,957	703,569	1,142,319
2000	21.55	453,971	438,750	852,851	453,971	892,721
2001	21.34	1,611,510	438,750	1,193,745	1,611,510	2,050,260
2002	30.19	2,769,050	438,750	1,534,639	2,769,050	3,207,800
2003	18.70	5,100,879	438,750	1,875,533	5,100,879	5,539,629
2004	18.36	5,671,274	438,750	2,499,175	5,671,274	6,110,024
2005	18.70	7,415,958	438,750	2,934,318	7,415,958	7,854,708
2006	22.51	8,867,070	438,750	3,416,586	8,867,070	9,305,820
2007	23.24	10,318,182	438,750	3,898,854	10,318,182	10,756,932
2008	23.29	1,676,885	853,125	6,686,074	1,676,885	2,530,010
2009	20.21	3,095,860	995,313	5,217,572	3,095,860	4,091,173
2010	22.22	4,514,835	1,137,501	6,852,316	4,514,835	5,652,336
2011	18.23	5,933,810	1,500,000	7,671,334	5,933,810	7,433,810
2012	18.22	7,352,785	1,500,000	8,490,351	7,352,785	8,852,785
2013	18.22	8,771,760	1,500,000	9,309,369	8,771,760	10,271,760

Sources: NSE Annual Reports (Various Issues)

For Ashaka Cement Company Plc, Table 4.2 above indicates that in 1987, interest rate was 19.20% and rose to 36.09% in 1993 which represents about 88% increase. In the same period, the bond issue was never stable as it kept undulating on the average of N1625347 representing 69% decrease in the number of bonds issued. For preference shares, it was N438,450 in 1987 and it remained stable till 2007. This clearly shows that Management of Ashaka Cement Company Plc relied on the stability of preference shares for the purpose of financing its business. Within the period under review, Management of Ashaka Cement Company Plc did not fully embrace rights issued as it fell from N3,578,771 in 1987 to N1,533,407 in 1993 representing reduction by about 57%. Retained earnings kept moving up and down and sharply climbed to N2,201,159 in 1993 representing about 125% increase from 978,601 in 1987. In like manner, ordinary shares were not stable between 1987 and 1993 as it rocked between N1,417,351 and N2,539,909 representing about 79% increase. Between 1994 and 2013, interest rate reduced from 21% to 18.22%. Under the same period, bonds issued increased from N1,951,561 to N8771760

representing about 349%. This implies that as interest rate decreased, the Management of Ashaka Cement Plc embraced bonds Issue as financing strategy. Preference shares was stable at N438,750 till 2007 and sharply increased to N1,500,000 in 2013 representing about 242% increase. Between 1994 and 2013, rights issue, retained earnings and ordinary shares increased by about 681%, 349% and 300% respectively. Once again, it implies that Management of Ashaka Cement Company Plc depended more on these financing strategies within the period under review. Finally, it shows that investors would prefer a more stable stock market.

Table 4.3: Data on Berger Paints Company Plc (N Million)

Years	Interest Rate	Bonds Issued	Preference Shares	Rights Issued	Retained Earnings	Ordinary Shares
1987	19.20	2,363,731	329,681	456,883	2,363,731	2,693,412
1988	17.60	2,207,910	336,200	442,893	2,207,910	2,544,110
1989	24.60	2,052,089	342,719	428,903	2,052,089	2,394,808
1990	27.70	1,896,268	349,238	414,913	1,896,268	2,245,506
1991	20.80	1,740,447	355,757	400,923	1,740,447	2,096,204
1992	31.20	1,584,626	362,276	386,933	1,584,626	1,946,902
1993	36.09	1,428,805	368,795	372,943	1,428,805	1,797,600
1994	21.00	1,272,984	375,314	358,953	1,272,984	1,648,298
1995	20.79	1,117,163	381,833	344,963	1,117,163	1,498,996
1996	20.86	961,342	388,352	330,973	961,342	1,349,694
1997	23.32	805,521	394,871	316,983	805,521	1,200,392
1998	21.34	649,700	401,390	302,993	649,700	1,051,090
1999	27.19	584,997	407,909	289,003	584,997	992,906
2000	21.55	155,821	414,428	275,013	155,821	570,249
2001	21.34	273,355	420,947	261,023	273,355	694,302
2002	30.19	702,531	427,466	247,033	702,531	1,129,997
2003	18.70	1,131,707	433,985	233,043	1,131,707	1,565,692
2004	18.36	858,546	451,108	277,883	858,546	1,309,654
2005	18.70	1,053,610	843,517	1,278,679	1,053,610	1,897,127
2006	22.51	1,131,617	855,338	1,294,104	1,131,617	1,986,955
2007	23.24	1,209,625	981,866	1,608,082	1,209,625	2,191,490
2008	23.29	674,317	1,165,166	1,090,327	674,317	1,839,483
2009	20.21	780,553	1,266,830	1,059,297	780,553	2,047,383
2010	22.22	780,034	1,611,037	1,074,250	780,034	2,391,071
2011	18.23	977,805	1,678,755	1,226,545	977,805	2,656,560
2012	18.22	1,112,631	1,735,483	1,309,651	1,112,631	2,848,114
2013	18.22	1,100,939	2,435,702	1,557,794	1,100,939	3,536,641

Sources: NSE Annual Reports (Various Issues)

Table 4.2.3 above shows that Berger Paints Company Plc operated under the same interest rate of 19.20% in 1987 and 36.09% in 1993 which represents about

88% increase. The Management of Berger Paints again did not fully embrace bonds issue as it decreased from N2,363,731 to N1,272,984 representing about 46%. The applications of preference shares increased by 12%, rights issue decreased by 21%, retained earnings reduced by 46% and ordinary shares finally decreased by 39% between 1987 and 1993. It is therefore, clear that the Management of Berger Paints depended more on preference shares as her financing strategy within this period. Between 1994 and 2013, bonds issue decreased by about 14%; Preference shares increased by 549%; rights issue increased by 334%; retained earnings fell by 26%; and finally, ordinary shares increased by 115%. These unpredictable movements could be traced to instability in the Nigerian stock market.

Table 4.4: Data on Beta Glass Company Plc (N Million)

OBS	Interest Rate	Bonds Issued	Preference Shares	Rights Issue	Retained Earning	Ordinary Shares
1987	19.20	494,856	2,162,099	657,350	494,856	2,656,955
1988	17.60	597,450	2,324,696	949,964	597,450	2,922,146
1989	24.60	700,044	2,487,293	1,242,578	700,044	3,187,337
1990	27.70	802,638	2,649,890	1,535,192	802,638	3,452,528
1991	20.80	905,232	2,812,487	1,827,806	905,232	3,717,719
1992	31.20	1,007,826	2,975,084	2,120,420	1,007,826	3,982,910
1993	36.09	1,110,420	3,137,681	2,413,034	1,110,420	4,248,101
1994	21.00	1,213,014	3,300,278	2,705,648	1,213,014	4,513,292
1995	20.79	1,315,608	3,462,875	2,998,262	1,315,608	4,778,483
1996	20.86	1,418,202	3,625,472	3,290,876	1,418,202	5,043,674
1997	23.32	1,520,796	3,788,069	3,583,490	1,520,796	5,308,865
1998	21.34	1,623,390	3,950,666	3,876,104	1,623,390	5,574,056
1999	27.19	1,725,984	4,113,263	4,168,718	1,725,984	5,839,247
2000	21.55	671,422	4,275,860	4,461,332	671,422	4,947,282
2001	21.34	1,068,828	4,438,457	4,753,946	1,068,828	5,507,285
2002	30.19	1,466,234	4,601,054	5,046,560	1,466,234	6,067,288
2003	18.70	1,863,640	4,763,651	5,339,174	1,863,640	6,627,291
2004	18.36	2,261,046	4,926,248	5,631,788	2,261,046	7,187,294
2005	18.70	2,219,054	5,031,343	5,728,236	2,219,054	7,250,397
2006	22.51	2,390,718	5,366,979	6,166,314	2,390,718	7,757,697
2007	23.34	4,064,403	6,165,053	8,835,764	4,064,403	10,229,456
2008	23.29	3,919,132	6,223,715	8,598,567	3,919,132	10,142,847
2009	20.21	4,372,251	6,548,069	9,351,338	4,372,251	10,920,320

2010	22.22	3,422,025	9,514,405	8,761,800	3,422,025	12,936,430
2011	18.23	3,647,773	11,327,212	6,164,011	3,647,773	14,974,985
2012	18.22	5,240,199	12,455,803	9,891,975	5,240,199	17,696,002
2013	18.22	11,618,833	13,271,922	8,941,707	11,618,833	24,890,755

Source: NSE Annual Reports (Various Issues)

Table 4.4 above shows data on Beta Glass Company Plc. The company applied the use of bonds as her financing strategy from 1987 to 1999 whose figures ranged from N494,856 to N1,725,984 representing about 249% increase. However, it fell to N671,422 in the year 2,000 and started increasing till 2013. Preference shares were positive for the company within the period under review. This is despite the fact that Stock Exchange Market was volatile within the period. This is attributed to the fact that the company deliberately relied on preference shares and rights issues for her financing strategies. Again, the company distributed most of her profits through dividend payments and as evident, retained earnings was inconsistent. For example retained earnings rose from N494,856 in 1987 to N905,232 in 1991 representing about 83% increase. However, retained earnings plunged to 671,422 in the year 2000, rose to N1,068,828 in 2001, N4,064,403 in 2000, fell back to N3,919,132 in 2008 and ended up in N11,618,833 in 2013. These erratic movements can be attributed to the Stock Exchange Market that was not stable.

Table 4.5: Data on Cadbury Nigeria PLc (N Million)

Years	Interest Rate	Bonds Issued	Preference Shares	Rights Issued	Retained Earnings	Ordinary Shares
1987	19.20	12,573,564	917,301	1,678,374	12,573,564	13,490,865
1988	17.60	12,000,325	981,195	1,718,851	12,000,325	12,981,520
1989	24.60	11,427,086	1,045,089	1,759,328	11,427,086	12,472,175
1990	27.70	10,853,847	1,108,983	1,799,805	10,853,847	11,962,830
1991	20.80	10,280,608	1,172,877	1,840,282	10,280,608	11,453,485
1992	31.20	9,707,369	1,236,771	1,880,759	9,707,369	10,944,140
1993	36.09	9,134,130	1,300,665	1,921,236	9,134,130	10,434,795
1994	21.00	8,560,891	1,364,559	1,961,713	8,560,891	9,925,450

1995	20.79	7,987,652	1,428,453	2,002,190	7,987,652	9,416,105
1996	20.86	7,414,413	1,492,347	2,042,667	7,414,413	8,906,760
1997	23.32	6,841,174	1,556,241	2,083,144	6,841,174	8,397,415
1998	21.34	6,267,935	1,249,865	2,123,621	6,267,935	7,517,800
1999	27.19	5,694,696	1,935,971	2,164,098	5,694,696	7,630,667
2000	21.55	5,121,457	2,622,077	2,204,575	5,121,457	7,743,534
2001	21.34	4,548,218	3,308,183	2,245,052	4,548,218	7,856,401
2002	30.19	5,279,818	6,865,400	3,337,240	5,279,818	12,145,218
2003	18.70	5,892,165	8,243,088	3,759,881	5,892,165	14,135,253
2004	18.36	10,325,527	9,425,111	6,230,817	10,325,566	19,750,638
2005	18.70	12,882,566	10,320,197	6,657,669	12,882,566	2,202,763
2006	22.51	22,456,887	2,402,796	13,645,540	22,456,887	24,859,683
2007	23.34	23,444,052	2,402,796	13,645,540	22,456,887	23,957,621
2008	23.29	25,864,656	2,734,527	11,613,492	25,864,656	28,599,183
2009	20.21	23,444,053	5,982,623	10,240,543	23,444,053	29,426,676
2010	22.22	25,864,657	13,574,885	14,628,547	25,864,657	39,439,542
2011	18.23	15,265,826	17,376,786	11,249,111	15,265,826	32,642,612
2012	18.22	18,037,528	21,773,887	12,964,243	18,037,528	39,811,415
2013	18.22	20,809,230	26,170,988	14,679,375	20,809,230	46,980,218

Source: NSE Annual Reports (Various Issues)

Table 4.5 displays data on Cadbury Nigeria Plc. A critical observation shows that bonds issue was not stable at all. For instance, it fell from N12,573,564 in 1987 to N4,548,218 in 2001 which represents about 64%. It attempted to rise in 2002 till 2010 before it fell again in 2011. It increased in 2012 and ended in 2013 with N20,809,230 issues. These unpredictable movements could be traced to inflationary pressure and sluggish Stock Capital Market. Account preference shares were not different from that of the bond issue. Preference shares were unreliable as it was rising and falling. This could be attributed to the fact that there was public loss of confidence in the Stock Exchange Market and therefore, patronage could not be predicted. For this period under review, rights issue was encouraging as the company relied more on her existing stockholders for the financing of their business. To encourage the existing stockholders, retained earnings plummeted as more and more profits was shared as dividends. The company did not rely much on retained earning as the figures shows. For instance, in 1987, retained earnings was

N12,573,564 while in the year 2001 it was N4,548,218 representing about 64% reduction. In 2002, retained earnings rose from N5,279,818 to N25,864,657 in 2010 representing about 390%. By 2011, retained earnings has gone back again to N15,265,826 but started increasing once more to N20,809,203 in 2013. The company's ordinary shares had similar undulating values. It simply kept rising and falling and was at its lowest in 1998 with a value of N7,517,800 while its highest value was N46,980,218 in 2013. As earlier mentioned, these erratic movements could be traced to instability in the stock exchange market within the period under review and the discouraging naira value against the dollar.

Table 4.6: Data on Cement Company of Northern Nigeria (CCNN) Ltd (N Million)

Years	Interest Rate	Bonds Issued	Preference Shares	Rights Issued	Retained Earnings	Ordinary Shares
1987	19.20	578,479	3,520,788	713,749	578,479	4,099,266
1988	17.60	627,681	3,279,179	786,686	627,681	3,906,860
1989	24.60	676,884	3,037,571	859,623	676,884	3,714,454
1990	27.70	726,086	2,795,962	932,560	726,086	3,522,048
1991	20.80	775,289	2,554,354	1,005,497	775,289	3,329,647
1992	31.20	824,491	2,312,745	1,078,434	824,491	3,137,236
1993	36.09	873,694	2,071,137	1,151,371	873,694	2,944,830
1994	21.00	922,896	1,829,528	1,224,308	922,896	2,752,424
1995	20.79	972,099	1,587,920	1,297,245	972,099	2,560,018
1996	20.86	1,021,301	1,346,311	1,370,182	1,021,301	2,367,612
1997	23.32	1,070,504	1,104,730	1,443,119	1,070,504	2,175,206
1998	21.34	1,119,706	863,094	483,938	1,119,706	1,982,800
1999	27.19	1,168,909	678,479	663,492	1,168,909	1,847,388
2000	21.55	588,434	265,890	633,081	588,434	854,324
2001	21.34	1,329,414	195,262	917,617	1,329,414	1,524,676
2002	30.19	2,067,220	579,886	1,062,659	2,067	2,647,106
2003	18.70	2,648,768	675,716	2,074,289	2,648,768	3,324,484
2004	18.36	565,197,819	1,406,438	2,160,467	565,197,819	1,971,636,876
2005	18.70	722,539,869	1,606,945	2,140,175	722,539,869	2,329,485,858
2006	22.51	2,232,226,818	1,544,253,532	2,753,158,990	8776594385	3,776,480,350
2007	23.34	911,631,238	3,148,332,114	4,016,742,426	911,631,238	4,059,963,352
2008	23.29	3,630,904,771	3,976,416,060	4,654,692,365	3,976,416	7,607,320,831
2009	20.21	4,327,470,271	4,217,876,670	4,950,494,290	4,217,876	8,545,346,941
2010	22.22	5,024,035,771	4,459,337,280	5,246,296,215	4,459,337	9,483,373,051
2011	18.23	5,567,938,757	7,008,153,571	5,690,691,335	7,008,153	12,576,092,328
2012	18.22	6,602,945,454	7,638,709,969	6,501,058,894	7,638,709	14,241,655,423
2013	18.22	7,637,952,151	8,269,266,367	7,311,426,453	8,269,266	15,907,218,518

Source: NSE Annual Reports (Various Issues)

Table 4.6 above holds the data for Cement Company of Northern Nigeria (CCNN) Ltd. Under the interest rate deregulation period, the company did fairly well in the Stock Exchange Market as recorded by all our measuring variables. Such Management determination could be traced to sheer dogged believe in the Stock Market System as having the ability to bounce back someday, hence, the continued patronage. It can also be seen that the Stock Exchange market of Nigerian was their only hope of financially sustaining their business. Though there were periods of rising and falling of the market values for the company. For instance, bonds issued in 1997 were N578,479 and it rose to N1,168,909 in 1999 representing about 102% increase. In the year 2000, bonds issued plunged to N588,434 representing about 50% fall. It rose again in 2001 from a value of N1,329,414 to N2,232,226,818 in 2006. Fell back to 911,631,238 in 2007 and ended up with a value of N7,637,952,151 in 2013. For preference shares, the company also plummeted from N3,520,788 in 1987 to N195,262 in 2001 representing about 94%. It started rising in 2002 with a value of N579,886 to N8,269,266,367 in 2013. Rights issue increased from N713,749 in 1987 to N1,443,119 in 1997 which represents about 102%. In 1998, it fell by 66% going by the previous year as base year. It started to rise again in 1999 with a value of N663,429 and ended up with a value of N7,311,426,453 in 2013. The company's retained earnings had similar experience by the same up and down movement like that of the Bond issue. For the ordinary shares, the value was N4,099,266 in 1987 but fell to N854,324 in the year 2000 which represents about 75% fall. In 2001, the value for ordinary shares was N1,524,676 while in 2013, the value became N15,907,218,518. As mentioned, these unstable movements could be traced to government policies, naira value against the dollar and almost a crashed Stocked Exchange Market within the period under review.

Table 4.7: Data on Dunlop Nigeria Ltd (N Million)

Years	Interest Rate	Bonds Issue	Preference Shares	Rights Issued	Retained Earnings	Ordinary Shares
1987	19.20	7,907,319	5,654,408	943,839	7,907,319	13,561,727
1988	17.60	7,375,935	5,357,506	951,835	7,375,935	12,733,441
1989	24.60	6,844,551	5,060,604	959,831	6,844,551	11,076,869
1990	27.70	6,313,167	4,763,702	967,827	6,313,167	11,076,869
1991	20.80	5,781,783	4,466,800	975,823	5,781,783	10,248,583

1992	31.20	5,250,399	4,169,898	983,819	5,250,399	9,420,297
1993	36.09	4,719,015	3,872,996	991,815	4,719,015	8,592,011
1994	21.00	4,187,631	3,576,094	999,811	4,187,631	7,763,725
1995	20.79	3,656,247	3,279,192	1,007,807	3,656,247	6,935,439
1996	20.86	3,124,863	2,982,290	1,015,803	3,124,863	6,107,153
1997	23.32	2,593,479	2,685,388	1,023,799	2,593,479	5,278,867
1998	21.34	2,062,095	2,388,486	1,031,795	2,062,095	4,450,581
1999	27.19	1,764,683	2,091,584	3,599,791	1,764,683	3,856,267
2000	21.55	531,384	1,794,682	1,987,787	531,384	2,326,066
2001	21.34	701,915	1,497,780	375,783	701,915	2,199,695
2002	30.19	1,935,214	1,200,878	1,236,221	1,935,214	3,136,092
2003	18.70	3,168,513	903,976	2,848,225	3,168,513	4,072,489
2004	18.36	2,380,155	3,935,349	10,996,681	2,380,155	6,315,504
2005	18.70	3,365,176	4,902,377	12,206,123	3,365,176	8,267,553
2006	22.51	3,587,647	6,269,613	17,086,353	3,587,647	9,857,259
2007	23.34	2,821,593	10,204,475	13,176,738	2,821,593	13,026,068
2008	23.29	2,055,540	14,139,338	9,267,123	2,055,540	16,194,877
2009	20.21	5,896,752	3,316,627	1,934,441	5,896,752	9,213,379
2010	22.22	6,075,313	3,848,453	1,581,176	6,075,313	9,923,766
2011	18.23	6,253,874	4,380,279	1,227,911	6,253,874	10,634,153
2012	18.22	7,207,581	5,364,664	1,197,231	7,207,581	1,842,917
2013	18.22	7,961,409	5,821,894	1,493,830	7,961,409	2,139,515

Source: NSE Annual Reports (Various Issues)

The Table 4.7 above houses the data on Dunlop Nigeria Ltd. Like most businesses in Nigeria, it had its own fair share of instability with the Nigerian Stock Exchange Market. For instance, in 1987, bonds issued were N7,907319, but it crashed to N531,384 in the year 2000. This fall is about 93%. It rose from N701,915 in 2001 to N3,168,513 in 2003 before crashing again to N2,380,155 in 2004. It increased from N3,365,176 in 2005 to N3,587,647 in 2006. Fell again from N2,821,593 in 2007 to N2,055,540 in 2008. It finally rose from N5,896,752 in 2009 to N7,691,409 in 2013 representing about 30%. Preference shares as financing strategy also fell from N5,654,408 in 1987 to N903,976 in 2003 representing about 84% reduction. Between 2004 and 2008, it increased from N3,935,349 to N14,139,338 amounting to about 259%. However it crashed once again to N3,316627 in 2009 and rose from N3,848,453 in 2010 to N5,821,894 in 2013 representing about 51% increase. Rights issues increased from N943,839 in 1987 to N3,599,791 in 1991 representing about 281%. It crashed to N1,236,221 in 2002, increased from N2,848,225 in 2003 to N13,176,738 in 2007. Funny enough, rights issues crashed once again from N9,267,123 in 2008 to N1,197,231 in 2012 but rose to N1,495,830 in 2013. The ordinary shares index fell from N13,561,727 in 1987 to N2,199,695 in 2001

representing about 84%. In 2002, it increased to N3,136,092 but suddenly crashed to the value of N9,213,379 in 2009. Between 2011 and 2013, ordinary share value were N10,634,153 and N2,139,515 showing a fall of about 80%. These noticeable unstable movements could be traced to government policies, naira value against the dollar and almost a crashed Stocked Exchange Market within the period under review. Moreover, Dunlop Nigeria Plc was not too stable in Nigeria having moved her business Headquarters to Ghana sighting unstable power supply in Nigeria as her main reason for relocation.

Table 4.8: Data on First Aluminum Plc

Years	Interest Rate	Bonds Issued	Preference Shares	Rights Issued	Retained Earnings	Ordinary Shares
1987	19.20	300,836	20,003	462,850	300,836	320,839
1988	17.60	394,700	95,930	530,018	394,700	490,630
1989	24.60	488,564	171,857	597,186	488,564	660,421
1990	27.70	582,428	247,784	664,354	582,428	830,212
1991	20.80	676,292	323,711	731,522	676,292	1,000,003
1992	31.20	770,156	399,638	798,690	770,156	1,169,794
1993	36.09	864,020	475,565	865,858	864,020	1,339.585
1994	21.00	957,884	551,492	933,026	957,884	1,509,376
1995	20.79	1,051,748	627,419	1,000,194	1,051,748	1,679,167
1996	20.86	1,145,612,	703,346	1,067,362	1,145,612	1,848,958
1997	23.32	1,239,476	779,273	1,134,530	1,239,476	2,018,749
1998	21.34	1,333,340	855,200	1,201,698	1,333,340	2,188,540
1999	27.19	259,194	931,127	1,201,698	259,194	1,190,321
2000	21.55	206,136	1,007,054	1,336,034	206,136	1,213,190
2001	21.34	671,466	1,082,981	1,403,202	671,466	1,754,447
2002	30.19	1,136,796	1,158,908	1,470,370	1,136,796	2,295,704
2003	18.70	1,602,126	1,234,835	1,537,538	1,602,126	2,836,961
2004	18.36	2,067,456	1,310,762	1,604,706	2,067,456	3,378,218
2005	18.70	2,532,786	1,386,689	1,671,874	2,532,786	3,919,475
2006	22.51	2,998,116	1,462,616	1,739,042	2,998,166	4,460,732
2007	23.34	3,463,446	1,538,543	1,806,210	3,463,446	5,001,989
2008	23.29	3,923,776	1,614,470	1,873,378	3,928,776	5,543,246
2009	20.21	3,842,278	6,367,834	5,857,058	3,842,278	10,210,112
2010	22.22	4,028,738	6,251,478	5,885,156	4,028,738	10,280,216
2011	18.23	3,909,371	5,929,396	5,713,794	3,909,371	9,838,767
2012	18.22	4,248,745	5,522,211	5,566,460	4,248,745	8,770,956
2013	18.22	4,282,292	4,610,450	5,331,184	4,282,292	8,892,742

Source: NSE Annual Reports (Various Issues)

Table 4.8 houses data on First Aluminum Plc. Values of bonds showed increase from N300,836 in 1987 to N1,333,340 in 1988 representing about 343%. It

fell between 1999 and 2000 by 20%. It experienced an upsurge again between 2001 and 2010 with an increase of about 500%, it fell to 3,909,371 in 2011 but increased from N4,248,745 in 2012 to N4,282,292 in 2013 amounting to 0.79%. Preference share had some wonderful time increasing as the company's main financial strategy between 1987 and 2010 with the values of N20,003 and N6,251,478 which represents about 31153%. This could be attributed to the era of high demand for aluminum products especially by house builders which made them to have good distributed profits as dividends and public conviction to the point of attracting high demand of the company's preference shares. This equally explains why the company employed her retained earnings and ordinary shares as other financial strategies as shown by the Table 4.2.8. Ordinary shares increased in 1987 from N320,839 to N2,188,540 in 1988 representing 582%. In 1999, ordinary shares fell to N1,190,321 but increased from N1,213,190 in 2000 to N10,280,216 in 2010 which is about 747%. It again reduced from N9,838,767 in 2011 to N8,770,956 in2012. Finally ordinary share increased to N8,892,742 in 2013 representing about 1.4%. These noticeable unstable movements could be traced to government policies, naira value against the dollar and almost a crashed Stocked Exchange Market within the period under review.

Table 4.9: Data on Flour Mills Nigeria Limited (N Million)

OBS	Interest Rate	Bonds Issued	Preference Shares	Rights Issued	Retained Earnings	Ordinary Shares
1987	19.20	1,493,104	1,613,736	0.9252468	1,493,104	3,106,840
1988	17.60	1,858,941	1,809,384	1.0273889	1,858,941	3,668,325
1989	24.60	2,224,778	2,005,032	1.1095973	2,224,778	4,229,810
1990	27.70	2,590,615	2,200,680	1.1771884	2,590,615	4,791,295
1991	20.80	2,956,452	2,396,328	1.2337426	2,956,452	5,352,780
1992	31.20	3,322,289	2,591,976	1.2817592	3,322,289	5,914,265

1993	36.09	3,688,126	2,787,624	1.3230357	3,688,126	6,475,750
1994	21.00	4,053,963	2,983,272	1.3588982	4,053,963	7,037,235
1995	20.79	4,419,800	3,178,920	1.3903464	4,419,800	7,598,720
1996	20.86	4,785,637	3,374,568	1.418148	4,785,637	8,160,205
1997	23.32	5,151,474	3,570,216	1.4429026	5,151,474	8,721,690
1998	21.34	5,517,311	3,765,864	1.465085	5,517,311	9,283,175
1999	27.19	925,278	3,961,512	0.2335669	925,278	4,886,790
2000	21.55	134,163	4,157,160	0.0322728	134,163	4,291,323
2001	21.34	4,193,604	4,352,808	0.963425	4,193,604	8,546,412
2002	30.19	8,521,371	4,548,456	1.8734645	8,521,371	13,069,827
2003	18.70	12,849,138	4,744,104	2.7084436	12,849,138	17,593,242
2004	18.36	13,560,090	5,261,612	2.5771741	13,560,090	18,821,702
2005	18.70	15,168,957	10,770,073	1.4084359	15,168,957	25,939,030
2006	22.51	17,955,569	13,785,283	1.3025173	17,955,569	31,740,852
2007	23.24	18,293,394	19,024,793	0.9615555	18,293,394	37,318,187
2008	23.29	19,930,410	24,264,303	0.8213881	19,930,410	44,194,713
2009	20.21	20,701,299	29,503,813	0.7016483	20,701,299	50,205,112
2010	22.22	21,688,720	34,743,323	0.6242558	21,688,720	56,432,043
2011	18.23	22,676,140	42,063,788	0.5390894	22,676,140	64,739,928
2012	18.22	92,500,212	80,039,534	1.1556815	92,500,212	172,539,746
2013	18.22	130,366,208	93,523,520	1.3939403	130,366,208	223,889,728

Source: NSE Annual Reports (Various Issues)

The Table 4.9 above shows the data on Flour Mills Nigeria Limited. It shows that bonds issue gradually increased from N1493104 to N5517311 between 1987 and 1998 which represents about 270% increase in bond financing by the company. Also, during the interest rate deregulation, the use of preference shares equally increased from N1613736 to N3765864 which represent about 133%. Rights issue, retained earnings and ordinary shares increased by 58%, 270% and 199% respectively. Again, between 1999 and 2013, interest rate lowered from 27.19% to 18.22% which affected bonds market, preference shares, rights issue, retained earnings and ordinate shares for Flour Mills Nigeria Limited to increase by 13,989%, increase by 2261%, reduce by 4.36% and increase by 4482% respectively. These noticeable unstable movements could be traced to government policies, naira value against the dollar and almost a crashed Stocked Exchange Market within the period under review.

Table 4.10: Data on GlaxosmithKline Plc (N Million)

OBS	Interest Rate	Bonds Issued	Preference Shares	Rights Issued	Retained Earnings	Ordinary Shares
1987	19.20	488,107	445,430	1.0958108	488,107	933,537
1988	17.60	521,497	469,530	1.1106788	521,497	991,027
1989	24.60	554,887	493,630	1.124095	554,887	1,048,517
1990	27.70	588,277	517,730	1.1362621	588,277	1,106,007
1991	20.80	621,667	541,830	1.147347	621,667	1,163,497
1992	31.20	655,057	565,930	1.1574877	655,057	1,220,987
1993	36.09	688,447	590,030	1.1668768	688,447	1,278,477
1994	21.00	721,837	614,130	1.1753814	721,837	1,335,967
1995	20.79	755,227	638,230	1.1833148	755,227	1,393,457
1996	20.86	788,617	662,330	1.1906708	788,617	1,450,947
1997	23.32	822,007	686,430	1.1975103	822,007	1,508,437
1998	21.34	855,397	710,530	1.2038858	855,397	1,565,927
1999	27.19	888,787	734,630	1.2098431	888,787	1,623,417
2000	21.55	577,823	132,466	4.3620476	577,823	710,289
2001	21.34	655,567	469,698	1.3957202	655,567	1,125,265
2002	30.19	1,488,957	1,071,862	1.3891313	1,488,957	2,560,819
2003	18.70	2,322,347	1,674,026	1.3872825	2,322,347	3,996,373
2004	18.36	3,155,737	2,276,190	1.3864119	3,155,737	5,431,927
2005	18.70	4,547,997	2,775,411	1.6386751	4,547,997	7,323,408
2006	22.51	3,894,279	3,742,505	1.0405541	3,894,279	7,636,784
2007	23.24	3,715,140	4,029,075	0.9220826	3,715,140	7,744,215
2008	23.29	3,491,032	4,764,841	0.732665	3,491,032	8,255,873
2009	20.21	3,266,924	5,500,607	0.5939206	3,266,924	8,767,531
2010	22.22	5,504,607	7,385,195	0.745357	5,504,607	12,889,802
2011	18.23	7,388,344	8,911,598	0.8290706	7,388,344	16,299,942
2012	18.22	11,068,641	10,502,627	1.0538926	11,068,641	21,571,268
2013	18.22	13,840,146	12,182,007	1.1361138	13,840,146	26,022,153

Source: NSE Annual Reports (Various Issues)

Table 4.10 on Glaxosmithkline Plc shows that the company had an increased application for bonds issue from N488,107 to N888,787 between 1987 and 1999 representing about 82% during the period of deregulated interest rate. Within the same period, preference shares increased by N445,430 to N734,630 representing about 65%. In like manner, rights issue increased from N1.0958108 to N1.2098431 representing about 10%. Retained earnings increased by 83% while ordinary shares

increased by about 68%. Between 2000 and 2013, Glaxosmithkline Plc applied 2295% of bonds to finance her business. In like manner, the company also increased the use of preference shares; decreased rights issue; increased retained earnings and increased ordinary shares by about 9096%, 74%, 1457% and 3564% respectively. These movements could be traced to the fact that Glaxosmithkline Plc became one of the World's leaders in pharmaceutical which enabled it to stabilize her patronage of the Niger Stock Exchange Market.

Table 4.11: Data on Guinness Nigeria Plc (N Million)

OBS	Interest Rate	Bonds Issued	Preference Shares	Rights Issued	Retained Earnings	Ordinary Shares
1987	19.20	1,723,432	2,042,409	0.8438232	1,723,432	3,765,841
1988	17.60	1,820,446	2,709,761	0.6718105	1,820,446	4,530,207
1989	24.60	1,917,460	3,377,113	0.5677808	1,917,460	5,294,573
1990	27.70	2,014,474	4,044,465	0.4980817	2,014,474	6,058,939
1991	20.80	2,111,488	4,711,817	0.4481261	2,111,488	6,823,305
1992	31.20	2,208,502	5,379,169	0.4105656	2,208,502	7,587,671
1993	36.09	2,305,516	6,046,521	0.3812963	2,305,516	8,352,037
1994	21.00	2,402,530	6,713,873	0.3578456	2,402,530	9,116,403
1995	20.79	2,499,544	7,381,225	0.3386354	2,499,544	9,880,769
1996	20.86	2,596,558	8,048,577	0.3226108	2,596,558	10,645,135
1997	23.32	2,693,572	8,715,929	0.3090401	2,693,572	11,409,501
1998	21.34	2,790,586	9,383,281	0.2973998	2,790,586	12,173,867
1999	27.19	2,887,600	4,917,626	0.5871939	2,887,600	7,805,226
2000	21.55	2,639,643	7,792,843	0.3387265	2,639,643	10,432,486
2001	21.34	6,002,717	10,668,060	0.5626812	6,002,717	16,670,777
2002	30.19	12,157,896	14,157,810	0.8587413	12,157,896	26,315,706
2003	18.70	18,313,075	15,189,428	1.2056461	18,313,075	33,502,503
2004	18.36	18,884,045	19,908,244	0.948554	18,884,045	38,792,289
2005	18.70	15,061,854	18,227,442	0.8263285	15,061,854	33,289,296
2006	22.51	20,670,006	20,947,782	0.9867396	20,670,006	41,617,788
2007	23.24	26,568,316	31,638,842	0.8397373	26,568,316	58,207,158
2008	23.29	25,640,278	36,862,557	0.6955643	25,640,278	62,502,835
2009	20.21	24,712,240	31,524,701	0.7839009	24,712,240	56,236,941
2010	22.22	23,784,202	34,199,119	0.6954624	23,784,202	57,983,321
2011	18.23	56,583,281	38,871,371	1.4556544	56,583,281	95,454,652
2012	18.22	67,398,153	38,611,514	1.7455455	67,398,153	106,009,667
2013	18.22	75,021,510	46,039,111	1.6295169	75,021,510	121,060,621

Sources: NSE Annual Reports (Various Issues)

Table 4.11 on Guinness Nigeria Plc shows that the company had increased bonds issue from N1723432 to N2887600 between 1987 and 1999 which represents about 68%. Though bonds issue fell to N2,639,643 in the tear 2000, the company continued to apply bonds issue between the year 2000 and 2013 from N2,639,643 to N75,021,510 which represents about 2742% increase. The use of preference shares for financing the business also rose from N2,042,409 in 1987 to N9,383,281 in 1999 representing about 359%. Between the year 2000 and 2008, the company increased the use of preference shares for its financing option from N7,792,843 to N36,862,557 representing about 373%. It fell in 2009 to N31,524,701 amd ended up with a value of N46,039,111 in 2013. Rights issue decreased from N0.8438232 to N0.5871939 translating to about 30%. However, the same rights issue increased from N0.3387265 to N1.6295169 amounting to about 381%. For retained earnings, Guinness Nigeria Plc increased the financing of her business from N1,723,432 to N2,887,600 which is about 66%. Between 2000 and 2013, the company sharply increased the use of retained earnings for business financing from N2639643 to N75,021,510 which is about 2742%. Finally the company equally increased the use of ordinary shares by 107% between 1987 and 1999. The company witnessed a sharp increase in the use of ordinary share for business financing N10432486 to N121060621 representing about 1060%. These noticeable unstable movements could be traced to government policies, naira value against the dollar and almost a crashed Stocked Exchange Market within the period under review.

Table 4.12: Data on Lafarge Cement WAPCO Plc (N Million)

OBS	Interest Rate	Bonds Issued	Preference Shares	Rights Issued	Retained Earnings	Ordinary Shares
1987	19.20	1,120,408	4,343,726	0.2579372	1,120,408	5,464,134
1988	17.60	2,536,756	4,463,474	0.5683368	2,536,756	7,000,230
1989	24.60	3,953,104	4,583,222	0.8625164	3,953,104	8,536,326
1990	27.70	5,369,452	4,702,970	1.1417152	5,369,452	10,072,422
1991	20.80	6,785,800	4,822,718	1.407049	6,785,800	11,608,518
1992	31.20	8,202,148	4,942,466	0.2266901	8,202,148	6,062,874
1993	36.09	9,618,496	5,062,214	0.501116	9,618,496	7,598,970
1994	21.00	3,953,104	5,181,962	0.7628586	3,953,104	9,135,066
1995	20.79	5,369,452	5,301,710	1.0127774	5,369,452	10,671,162
1996	20.86	6,785,800	5,421,458	1.251656	6,785,800	12,207,258
1997	23.32	8,202,148	5,541,206	1.48021	8,202,148	13,743,354
1998	21.34	9,618,496	5,660,954	1.6990946	9,618,496	15,279,450
1999	27.19	11,034,844	5,780,702	1.9089108	11,034,844	16,815,546
2000	21.55	12,451,192	15,100,450	0.8245577	12,451,192	27,551,642
2001	21.34	13,867,540	11,820,198	1.1732071	13,867,540	25,687,738
2002	30.19	13,152,479	8,539,946	1.5401127	13,152,479	21,692,425
2003	18.70	20,963,055	5,259,694	3.9856035	20,963,055	26,222,749
2004	18.36	15,985,175	2,627,591	6.0835857	15,985,175	18,612,766
2005	18.70	15,836,817	15,501,018	1.021663	15,836,817	31,337,835
2006	22.51	16,396,206	25,546,742	0.641812	16,396,206	41,942,948
2007	23.24	15,748,127	32,806,011	0.4800379	15,748,127	48,554,138
2008	23.29	18,099,375	40,456,120	0.4473829	18,099,375	58,555,495
2009	20.21	10,674,274	43,710,508	0.2442038	10,674,274	54,384,782
2010	22.22	58,070,126	48,291,761	1.2024852	58,070,126	106,361,887
2011	18.23	32,487,776	56,066,041	0.5794555	32,487,776	88,553,817
2012	18.22	55,557,561	63,840,321	0.8702582	55,557,561	119,397,882
2013	18.22	66,464,312	71,614,601	0.9280833	66,464,312	138,078,913

Sources: NSE Annual Reports (Various Issues)

Table 4.12 presents data from Lafarge Cement WAPCO Plc. Under the interest rate deregulation period, the company gradually increased the use of bonds for financing from N1120408 to N11034844 between 1987 and 1999 representing about 885%. The use of bond as a financing option continued to increase from N12,451,192 to N66,464,312 indicating 434%. During the period 1987 to 1999, there was increased gradual use of preference shares from N4,343,726 to N5,780,702 amounting to about 33%. The year 2000 and 2013 witnessed a sharp increase in preference shares from N15,100,450 to N71,614,601 which correspond to about 374%. Rights issue kept rising and falling till it settled between N0.2579372 and N1.9089108 representing 640% increase for the period

1987 and 1999. Increase in rights issue between the year 2000 and 2013 continued from N0.8245577 to N0.9280833 amounting to about 13%. Lafarge Cement WAPCO Plc increased the use of retained earnings from N1,120,408 to N11,034,844 representing 885% between 1987 and 1999. It equally increased the application of the retained earning instrument for financing option from N12,451,192 to N66,464,312 amounting to 434%. Finally, ordinary shares were applied between 1987 and 1999 to about 208% increase and to about 401% increase between the year 2000 and 2013. Again, these unpredictable movements of the stock market could be traced to stock market instability.

Table 4.13: Data on Lifestock Feed Plc (N Million)

OBS	Interest Rate	Bonds Issued	Preference Shares	Rights Issued	Retained Earnings	Ordinary Shares
1987	19.20	112,959	116,227	0.9718826	112,959	229,186
1988	17.60	211,333	354,394	0.5963222	211,333	565,727
1989	24.60	309,707	592,561	0.5226584	309,707	902,268
1990	27.70	408,081	830,728	0.491233	408,081	1,238,809
1991	20.80	506,455	1,068,895	0.4738117	506,455	1,575,350
1992	31.20	604,829	1,307,062	0.4627393	604,829	1,911,891
1993	36.09	703,203	1,545,229	0.4550801	703,203	2,248,432
1994	21.00	801,577	1,783,396	0.4494666	801,577	2,584,973
1995	20.79	899,951	2,021,563	0.4451758	899,951	2,921,514
1996	20.86	998,325	2,259,730	0.4417895	998,325	3,258,055
1997	23.32	1,096,699	2,497,897	0.4390489	1,096,699	3,594,596
1998	21.34	1,195,073	2,736,064	0.4367855	1,195,073	3,931,137
1999	27.19	1,293,447	2,974,231	0.4348845	1,293,447	4,267,678
2000	21.55	1,391,821	3,212,398	0.4332654	1,391,821	4,604,219
2001	21.34	435,625	3,450,565	0.1262474	435,625	3,886,190
2002	30.19	659,917	3,688,732	0.1789008	659,917	4,348,649
2004	18.36	1,108,501	830,728	1.334373	1,108,501	1,939,229
2005	18.70	1,332,793	1,068,895	1.2468886	1,332,793	2,401,688
2006	22.51	606,183	343,406	1.7652079	606,183	949,589
2007	23.24	1120,427	382,083	0.3151854	-120,427	-502,510
2008	23.29	584,715	363,912	1.6067483	584,715	948,627
2009	20.21	440,333	393,860	1.1179937	440,333	834,193
2010	22.22	619,617	422,164	1.4677163	619,617	1,041,781
2011	18.23	1,001,944	519,846	1.9273862	1,001,944	1,521,790
2013	18.22	1,759,424	745,770	2.3592046	1,759,424	2,505,194

Sources: NSE Annual Reports (Various Issues)

Table 4.13 shows data on Lifestock Feed Plc. The company had an increase in the use of bonds for financing her business between 1987 and 1999. This is shown by N112,959 and

N1,293,447 respectively representing 1045%. Between the year 2000 and 2013, bonds issue were between N1,391,821 and N1,759,424 representing about 26% increase. The use of preference share also increased between 1987 and 1999 with figures of N116,227 and N2,974,231 amounting to about 2459%. However, there was decrease in preference share as source of financing for the company as the Table 4.2.13 showed N3,212,398 in the year 2000 and N745,770 in 2013. This reflects about 77% decrease. Rights issue between 1987 and 1999 were N0.9718826 and N0.4348845 which represents a fall of about 55%. Rights issue was N0.4332654 in the year 2000 and N2.3592046 in 2013 showing an increase of about 445%. Between 1987 and 1999, the company applied retained earnings with about 1045%. Retained earnings continued to increase between the year 2000 and 2013 with figures of N1,391,821 and N1,759,424 respectively representing about 26%. The Table 4.2.13 shows that the company also made use of ordinary shares as financing option between 1987 and 1999 with an increase of about 1764%. Between the year 2000 and 2013, the company had a decreased application of ordinary shares with about 46% having the figures of N4,604,219 and N2,505,194 respectively. The unpredictable nature of these values can be traced to government policies, inflationary pressure and instability in the Nigerian Stock Exchange Market,

Table 4.14: Data on Neimeth Plc (N Million)

OBS	Interest Rate	Bonds Issued	Preference Shares	Rights Issued	Retained Earnings	Ordinary Shares
1987	19.20	1,536,241	118,981	12.91165	1,536,241	1,655,222
1988	17.60	1,496,278	166,351	8.994704	1,496,278	1,662,629
1989	24.60	1,456,315	213,721	6.8140941	1,456,315	1,670,036
1990	27.70	1,416,352	261,091	5.4247446	1,416,352	1,677,443
1991	20.80	1,376,389	308,461	4.4621168	1,376,389	1,684,850
1992	31.20	1,336,426	355,831	3.7557886	1,336,426	1,692,257
1993	36.09	1,296,463	403,201	3.2154261	1,296,463	1,699,664

1994	21.00	1,256,500	450,571	2.7886837	1,256,500	1,707,071
1995	20.79	1,216,537	497,941	2.4431348	1,216,537	1,714,478
1996	20.86	1,176,574	545,311	2.1576201	1,176,574	1,721,885
1997	23.32	1,136,611	592,681	1.917745	1,136,611	1,729,292
1998	21.34	1,096,648	640,051	1.713376	1,096,648	1,736,699
1999	27.19	1,056,685	687,421	1.537173	1,056,685	1,744,106
2000	21.55	1,016,722	734,791	1.3836887	1,016,722	1,751,513
2001	21.34	976,759	213,721	4.5702528	976,759	1,190,480
2002	30.19	936,796	261,091	3.5880057	936,796	1,197,887
2003	18.70	896,833	308,461	2.9074437	896,833	1,205,294
2004	18.36	896,653	418,994	2.1400139	896,653	1,315,647
2005	18.70	938,002	540,919	1.7340896	938,002	1,478,921
2006	22.51	917,931	1,576,000	0.5824432	917,931	2,493,931
2007	23.24	918,274	1,341,621	0.5655384	918,274	2,541,991
2008	23.29	861,456	1,615,199	0.5333436	861,456	2,476,655
2009	20.21	1,238,852	1,209,255	1.0244754	1,238,852	2,448,107
2010	22.22	1,255,065	1,160,416	1.0815647	1,255,065	2,415,481
2011	18.23	1,512,067	873,507	1.7310298	1,512,067	2,385,574
2012	18.22	1,708,871	646,116	2.6448385	1,708,871	2,354,987
2013	18.22	1,905,676	418,724	4.5511498	1,905,676	2,324,400

Sources: NSE Annual Reports (Various Issues)

Table 4.14 above shows data on Neimeth Plc financing option for the period under review. Between 1987 and 1999, the figures were N1,536,241 and N1,056,685 which shows a decrease of 31% for bonds issues. However, there was increased use of bonds issues between the year 2000 and 2013 with figures of N1,016,722 and N1,905,676 respectively representing about 87%. For preference shares, the figures between 1987 and 1999 were N118,981 and N687,421 respectively representing about 478% increase. However, the company reduced the use of preference shares between the year 2000 and 2013 with about 43%. Rights issue also was reduced with about 88% between 1987 and 1999. However, the figures of N1.3,836,887 and N4.5,511,498 for the year 2000 and 2013 showed an increase of about 229%. The company witnessed reduced application of retained

earnings within 1987 and 1999 with a 31%. This may be explained by the fact that the company paid high dividend to existing shareholders within the period under review. However, between 2000 and 2013, the company increased the use of retained earnings as financing option by about 87%. There was some slight increase in the use of ordinary shares for the company between 1987 and 1999 with about 5.37% with a figure of N1,655,222 and N1,744,106 respectively. The company continued to increase the use of ordinary shares between the year 2000 and 2013 with about 32%. Instability in the Stock Exchange Market and other unexplained economic variables could be traced to some of the unpredictable values and characters of the Stock exchange Market.

Table 4.15: Data on Nestle Nigeria Plc (N Million)

OBS	Interest Rate	Bonds Issued	Preference Shares	Rights Issued	Retained Earnings	Ordinary Shares
1987	19.20	1,410,676	83,204	16.95442527	1,410,676	1,493,880
1988	17.60	1,669,497	21,848	76.41417979	1,669,497	1,691,345
1989	24.60	1,928,318	126,900	15.19557132	1,928,318	2,055,218
1990	27.70	2,187,139	231,952	9.42927416	2,187,139	2,419,091
1991	20.80	2,445,960	337,004	7.257955395	2,445,960	2,782,964
1992	31.20	2,704,781	442,056	6.118638815	2,704,781	3,146,837
1993	36.09	2,963,602	547,108	5.416850055	2,963,602	3,510,710
1994	21.00	3,222,423	652,160	4.941154011	3,222,423	3,874,583
1995	20.79	3,481,244	757,212	4.597449591	3,481,244	4,238,456
1996	20.86	3,740,065	862,264	4.337494085	3,740,065	4,602,329
1997	23.32	3,998,886	967,316	4.134001712	3,998,886	4,966,202
1998	21.34	4,257,707	1,072,368	3.970378639	4,257,707	5,330,075
1999	27.19	1,410,676	1,177,420	1.198107727	1,410,676	2,588,096
2000	21.55	2,669,497	1,282,472	2.081524587	2,669,497	3,951,969
2001	21.34	5,749,670	1,387,524	4.143834629	5,749,670	7,137,194
2002	30.19	8,829,843	1,492,576	5.915841471	8,829,843	10,322,419
2003	18.70	11,9,016	1,5,6254	7.4581175	11,90,06	
2004	18.36	14,990,189	1,702,680	8.803879179	14,990,189	16,692,869
2005	18.70	16,875,084	5,980,312	2.821773178	16,875,084	22,855,396
2006	22.51	18,908,215	6,360,492	2.972759812	18,908,215	25,268,707
2007	23.24	20,941,346	6,236,521	3.357857049	20,941,346	27,177,867
2008	23.29	22,974,477	9,031,240	2.543889543	22,974,477	32,005,717
2009	20.21	25,007,608	10,543,935	2.371752861	25,007,608	35,551,543
2010	22.22	45,931,282	14,865,353	3.089821143	45,931,282	60,796,635

2011	18.23	54,518,309	23,209,984	2.348916268	54,518,309	77,728,293
2012	18.22	54,777,656	34,185,562	1.602362307	54,777,656	88,963,218
2013	18.22	67,612,679	30,359,714	2.227052551	67,612,679	97,972,393

Sources: NSE Annual Reports (Various Issues)

Table 4.2.15 above displays the financing option data for Nestle Nigeria Plc within the period under consideration. The table showed that the use of bonds issue was increasing till 1998 but nosedived back to the 1999 figure of N1,410,676 with about 67%. Ever thereafter, there was sharp increase of about 2,433%. The company applied preference shares between 1987 and 1999 with a sharp increase of 1369%. The use of preference shares continued to increase between the year 2000 and 2013 with about 2267% with the figures of N1,282,472 and N30,359,714 respectively. The company use of rights issue drastically increased from N16.95,442,527 in 1987 to N76.41,417,979 but however, continued to drop till 1999 to a figure of N1.198,107,727 representing about 93% as compared to the base year. Between the year 2000 and 2013, there was a little increase of about 7%. The company had an increased use of ordinary shares between 1987 and 1999 with about 73% while it witnessed a very sharp increase of the same use of ordinary shares between the year 2000 and 2013 with figures of N3,951,969 and N97,972,393 which represents 2379%. These could be attributed to an almost crashing stock market.

Table 4.16: Data on Nigerian Breweries Plc (N Million)

OBS	Interest Rate	Bonds Issued	Preference Shares	Rights Issued	Retained Earnings	Ordinary Shares
1987	19.20	6,175,016	4,097,541	1.5070053	6,175,016	10,272,557
1988	17.60	9,227,272	4,372,756	2.110173	9,227,272	13,600,028
1989	24.60	12,279,527	4,647,971	2.6419113	12,279,527	16,927,498
1990	27.70	15,331,783	4,923,186	3.1141993	15,331,783	20,254,969
1991	20.80	18,384,038	5,198,401	3.5364794	18,384,038	23,582,439
1992	31.20	21,436,294	5,473,616	3.9162947	21,436,294	26,909,910
1993	36.09	24,488,549	5,748,831	4.2597441	24,488,549	30,237,380
1994	21.00	27,540,805	6,024,046	4.5718118	27,540,805	33,564,851
1995	20.79	30,593,060	6,299,261	4.856611	30,593,060	36,892,321
1996	20.86	33,645,316	6,574,476	5.1175661	33,645,316	40,219,792
1997	23.32	36,697,571	6,849,691	5.3575513	36,697,571	43,547,262

1998	21.34	39,749,827	7,124,906	5.5789966	39,749,827	46,874,733
1999	27.19	96,802,082	7,400,121	23.624433	96,802,082	100,899,623
2000	21.55	91,854,338	7,675,336	21.006051	91,854,338	96,227,094
2001	21.34	86,906,593	8,843,053	9.8276685	86,906,593	95,749,646
2002	30.19	81,958,849	15,313,350	5.3521175	81,958,849	97,272,199
2003	18.70	77,011,104	21,783,647	3.5352714	77,011,104	98,794,751
2004	18.36	72,063,360	28,253,944	2.5505593	72,063,360	100,317,304
2005	18.70	67,115,615	34,724,241	1.9328173	67,115,615	101,839,856
2006	22.51	62,167,871	36,429,393	1.7065305	62,167,871	98,597,264
2007	23.24	57,220,126	43,183,042	1.3250601	57,220,126	100,403,168
2008	23.29	54,775,451	32,229,181	1.6995607	54,775,451	87,004,632
2009	20.21	42,318,498	46,570,094	0.9087054	42,318,498	88,888,592
2010	22.22	44,879,962	50,172,162	0.8945192	44,879,962	95,052,124
2011	18.23	137,142,382	78,304,741	1.7513931	137,142,382	215,447,123
2012	18.22	160,185,737	93,447,892	1.7141718	160,185,737	253,633,629
2013	18.22	183,229,092	108,591,043	1.6873315	183,229,092	291,820,135

Sources: NSE Annual Reports(Various Issues)

Table 4.16 above displays data for Nigerian Breweries Plc. The Table showed that the company financed her business positively by bond issue, preference shares, rights issue, retained earnings and ordinary shares between 1987 and 1999 by an increase of about 1468%, 81%, 1468%, 1468% and 882% respectively. For the period between 2000 and 2013, Nigerian Breweries Plc. had bond issue figure of N91,854,338 and N183,229, 092 representing an increase in the application of bonds issue as financing option by 99%. However, there was a fall in bond issue in 2003 to the value of N77,011,104 and another fall in 2007 with the value of N57,220,126. That of preference shares also increased from N7,675,336 to N108,591,043 representing about 1315%. The use of retained earnings also increased from N91,854,338 to N183,229,092 amounting to about 99%. Retained earnings fell in 2001 to the value of N86,906,593; N77,011,104 in 2003; N72,063,360 in 2004, etc The company equally employed the ordinary shares financing option as it recorded a phenomena increase of about 203%. These instabilities of the variables could be attributed to unstable Stock Exchange Market.

Table 4.17: Data on Nigerian-German Chemical Plc (N Million)

OBS	Interest Rate	Bonds Issued	Preference Shares	Rights Issued	Retained Earnings	Ordinary Shares
1987	19.20	1,015,839	765,147	1.327639	1,015,839	1,780,986
1988	17.60	994,781	780,543	1.274473	994,781	1,775,324
1989	24.60	973,723	795,939	1.2233639	973,723	1,769,662
1990	27.70	952,665	811,335	1.1741944	952,665	1,764,000
1991	20.80	931,607	826,731	1.1268563	931,607	1,758,338
1992	31.20	910,549	842,127	1.081249	910,549	1,752,676
1993	36.09	889,491	857,523	1.0372795	889,491	1,747,014
1994	21.00	868,433	872,919	0.9948609	868,433	1,741,352
1995	20.79	847,375	888,315	0.9539127	847,375	1,735,690
1996	20.86	826,317	903,711	0.9143598	826,317	1,730,028
1997	23.32	805,259	919,107	0.8761319	805,259	1,724,366
1998	21.34	784,201	934,503	0.8391637	784,201	1,718,704
1999	27.19	763,143	949,899	0.8033938	763,143	1,713,042
2000	21.55	742,085	965,295	0.768765	742,085	1,707,380
2001	21.34	721,027	980,691	0.7352234	721,027	1,701,718
2002	30.19	699,969	996,087	0.7027187	699,969	1,696,056
203	18.70	67811	1,1,483	0.12036	67,91	1,690,394
2004	18.36	829,824	1,047,080	0.7925125	829,824	1,876,904
2005	18.70	961,099	1,084,858	0.8859215	961,099	2,045,957
2006	22.51	1,155,042	1,183,121	0.976267	1,155,042	2,338,163
2007	23.24	1,240,559	1,273,415	0.9741985	1,240,559	2,513,974
2008	23.29	2,402,709	1,236,891	1.942539	2,402,709	3,639,600
2009	20.21	3,564,859	1,200,367	2.9698076	3,564,859	4,765,226
2010	22.2	3,275,570	2,407,224	1.3607251	3,275,570	5,682,794
2011	18.23	2,227,163	2,618,714	0.8504797	2,227,163	4,845,877
2012	18.22	2,819,354	2,303,718	1.2238277	2,819,354	5,123,072
2013	18.22	3,411,545	1,988,722	1.7154459	3,411,545	5,400,267

Sources: NSE Annual Reports (Various Issues)s

It is displayed by Table 4.17 that the Nigerian-German Chemical Plc reduced bond issue financing option between 1987 and 1999 by figures of N1,015,839 and N763,143 representing a decrease of about 25%. This decrease could be attributed to instability in the Stock Exchange Market. However, the use of the same bond issue increased between the year 2000 and 2013 by about 360%. Preference shares were also positive within 1987 and 1999 with an increase of about 24%. Again, it

continued to record increase in same preference shares for the period 2000 and 2013 with figures of N965,295 and N1,988,722 representing an increase of about 106%. On rights issue, the company did not apply much of it as it recorded a reduced figure from N1.327, 639 in 1987 to N0.8,033,938 in 1999 amounting to about 40% decrease. This is attributable to the fact that the company needed fresh persons who can pay higher share values than the existing owners in the company as part owners. However, there was increase in same rights issue for the period 2000 and 2013 with about 123%. The Nigerian-German Chemical Plc had reduction in retained earnings usage between 1987 and 1999 by about 25%. Figures on retained earnings then increased from N742,085 to N3,411,545 amounting to 360%. The company slightly had an increase in the application of ordinary shares between 1987 and 1999 with an increase of about 4%. Finally, ordinary shares for the period 2000 and 2013 increased from N1,707,380 to N5,400.267 which is about 216%.

Table 4.18: Data on Presco Plc (N Million)

OBS	Interest Rate	Bonds Issued	Preference Shares	Rights Issued	Retained Earnings	Ordinary Shares
1987	19.20	2,531,401	1,567,106	1.6153349	2,531,401	4,098,507
1988	17.60	2,422,868	1,608,688	1.5061143	2,422,868	4,031,556
1989	24.60	2,314,335	1,650,270	1.4023978	2,314,335	3,964,605
1990	27.70	2,205,802	1,691,852	1.3037795	2,205,802	3,897,654
1991	20.80	2,097,269	1,733,434	1.2098926	2,097,269	3,830,703
1992	31.20	1,988,736	1,775,016	1.1204045	1,988,736	3,763,752
1993	36.09	1,880,203	1,816,598	1.0350133	1,880,203	3,696,801
1994	21.00	1,771,670	1,858,180	0.9534437	1,771,670	3,629,850
1995	20.79	1,663,137	1,899,762	0.8754449	1,663,137	3,562,899
1996	20.86	1,554,604	1,941,344	0.8007875	1,554,604	3,495,948
1997	23.32	1,446,071	1,982,926	0.7292612	1,446,071	3,428,997
1998	21.34	1,337,538	2,024,508	0.6606731	1,337,538	3,362,046
1999	27.19	1,229,005	2,066,090	0.5948458	1,229,005	3,295,095
2000	21.55	1,120,472	2,107,672	0.5316159	1,120,472	3,228,144
2001	21.34	1,011,939	2,149,254	0.4708327	1,011,939	3,161,193
2002	30.19	903,406	2,190,836	0.4123567	903,406	3,094,242
2003	18.70	794,873	2,232,418	0.3560592	794,873	3,027,291
2004	18.36	686,340	2,274,000	0.3018206	686,340	2,960,340
2005	18.70	577,807	2,315,582	0.2495299	577,807	2,893,389

2006	22.51	789,184	2,155,681	0.366095	789,184	2,944,865
2007	23.24	1,268,663	1,956,962	0.6482819	1,268,663	3,225,625
2008	23.29	1,748,142	1,758,243	0.9942551	1,748,142	3,506,385
2009	20.21	1,980,025	2,623,167	0.7548223	1,980,025	4,603,192
2010	22.22	2,376,972	3,518,197	0.6756222	2,376,972	5,895,169
2011	18.23	2,732,653	18,738,986	0.1458272	2,732,653	21,471,639
2012	18.22	3,088,334	17,088,098	0.1807301	3,088,334	20,176,432
2013	18.22	3,444,015	15,437,210	0.2230983	3,444,015	18,881,225

Sources: NSE Annual Reports (Various Issues)

Table 4.18 has data on Presco Plc. It can be seen that the application of bonds issue as financing option nosedived from N2,531,401 in 1987 to N577,807 in 2005 representing about 77%. However, it started to experience some appreciable level of increase from 2006 with a figure of N789,184 to N3,444,015 in 2013 representing 336%. Preference shares increased from N1567106 in 1987 to N2155681 in 2013 representing about 38%.for rights issue, the company reduced its application as a financing option within 1987 and 2003 representing about 86% decrease. Retained earnings plummeted from N2,531,401 in 1987 to N577,807 in 2005 representing about 77%. However, retained earnings increased by 336% between 2006 and 2013. In like manner, ordinary shares plummeted from N4,098,507 in 1987 to N2,893,389 in 2005 which amounts to about 29% decrease. These value movements could be traced to government policies and unstable Stock Exchange Market.

Table 4.19: Data on PZ Industry Plc (N Million)

OBS	Interest Rate	Bonds Issued	Preference Shares	Rights Issued	Retained Earnings	Ordinary Shares
1987	19.20	2,014,116	1,425,855	1.4125672	2,014,116	3,439,971
1988	17.60	2,183,848	2,284,367	0.955997	2,183,848	4,468,215
1989	24.60	2,353,580	3,142,879	0.7488612	2,353,580	5,496,459
1990	27.70	2,523,312	4,001,391	0.6306087	2,523,312	6,524,703
1991	20.80	2,693,044	4,859,903	0.5541353	2,693,044	7,552,947
1992	31.20	2,862,776	5,718,415	0.500624	2,862,776	8,581,191
1993	36.09	3,032,508	6,576,927	0.4610828	3,032,508	9,609,435

1994	21.00	3,202,240	7,435,439	0.4306726	3,202,240	10,637,679
1995	20.79	3,371,972	8,293,951	0.406558	3,371,972	11,665,923
1996	20.86	3,541,704	9,152,463	0.3869673	3,541,704	12,694,167
1997	23.32	3,711,436	10,010,975	0.3707367	3,711,436	13,722,411
1998	21.34	3,881,168	10,869,487	0.35707	3,881,168	14,750,655
1999	27.19	4,050,900	11,727,999	0.3454042	4,050,900	15,778,899
2000	21.55	4,220,632	12,586,511	0.3353298	4,220,632	16,807,143
2001	21.34	885,527	13,445,023	0.0658628	885,527	14,330,550
2002	30.19	4,801,323	14,303,535	0.3356739	4,801,323	19,104,858
2003	18.70	8,717,119	15,162,047	0.5749302	8,717,119	23,879,166
2004	18.36	5,737,124	16,623,640	0.3451184	5,737,124	22,360,764
2005	18.70	8,558,619	19,914,819	0.4297613	8,558,619	28,473,438
2006	22.51	7,560,154	27,801,688	0.2719315	7,560,154	35,361,842
2007	23.24	9,970,737	28,093,215	0.3549162	9,970,737	38,063,952
2008	23.29	11,213,084	29,036,715	0.3861692	11,213,084	40,249,799
2009	20.21	11,446,244	33,167,940	0.3450996	11,446,244	44,614,185
2010	22.22	12,287,871	36,069,366	0.3406733	12,287,871	48,357,237
2011	18.23	13,129,498	38,970,792	0.3369061	13,129,498	52,100,290
2012	18.22	13,971,124	41,872,218	0.333661	13,971,124	55,843,342
2013	18.22	14,812,751	44,773,644	0.3308364	14,812,751	59,586,395

Sources: NSE Annual Reports (Various Issues)

Table 4.10 shows data on PZ industry Plc. Between 1987 and 2000, there was increased use of bonds issue from N2,014,116 to N4,220,632 which is about 110%. It had a further increase of 1572% between 2001 and 2013. Preference shares also increased from N14,125,672 in 1987 to N44,773,644 in 2013. The rights issue decreased from N1.4,125,672 in 1987 to N0.3,308,364 in 2013. Ordinary shares increased by 389% between 1987 and 2000. It decreased to N14,330,550 in 2001 and ended up in 2013 as N59,586,395 which is about 316% increase. Again, these value movements could be traced to government policies and unstable Stock Exchange Market.

Table 4.20: Data on UAC Nigeria Plc (N Million)

OBS	Interest Rate	Bonds Issued	Preference Shares	Rights Issued	Retained Earnings	Ordinary Shares
1987	19.20	5,893,784	910,075	6.476152	5,893,784	6,803,859
1988	17.60	5,847,178	1,033,828	5.6558518	5,847,178	6,881,006
1990	27.70	5,753,966	1,281,334	4.4906059	5,753,966	7,035,300
1991	20.80	5,707,360	1,405,087	4.0619264	5,707,360	7,112,447
1992	31.20	5,660,754	1,528,840	3.7026465	5,660,754	7,189,594

1993	36.09	5,614,148	1,652,593	3.3971752	5,614,148	7,266,741
1994	21.00	5,567,542	1,776,346	3.1342666	5,567,542	7,343,888
1995	20.79	5,520,936	1,900,099	2.9056044	5,520,936	7,421,035
1996	20.86	5,474,330	2,023,852	2.7049063	5,474,330	7,498,182
1997	23.32	5,427,724	2,147,605	2.5273381	5,427,724	7,575,329
1998	21.34	5,381,118	2,271,358	5.9128292	5,381,118	6,291,193
1999	27.19	5,334,512	2,395,111	5.1599608	5,334,512	6,368,340
2000	21.55	5,287,906	2,977,731	1.7758172	5,287,906	8,265,637
2001	21.34	5,241,300	4,921,634	1.0649512	5,241,300	10,162,934
2002	30.19	5,194,694	6,865,537	0.7566333	5,194,694	12,060,231
2003	18.70	5,148,088	8,809,440	0.5843831	5,148,088	13,957,528
2004	18.36	5,101,482	10,753,343	0.4744089	5,101,482	15,854,825
2005	18.70	5,054,876	12,697,246	0.3981081	5,054,876	17,752,122
2006	22.51	4,180,429	14,062,558	0.2972737	4,180,429	18,242,987
2007	23.24	6,023,144	14,892,872	0.4044313	6,023,144	20,916,016
2008	23.29	6,580,255	12,572,468	0.5233861	6,580,255	19,152,723
2009	20.21	7,296,518	11,500,331	0.6344616	7,296,518	18,796,849
2010	22.22	6,735,007	11,822,973	0.5696543	6,735,007	18,557,980
2011	18.23	6,174,607	15,509,376	0.3981209	6,174,607	21,683,983
2012	18.22	5,613,466	16,953,272	0.331114	5,613,466	22,566,738
2013	18.22	5,052,511	18,957,794	0.2665136	5,052,511	24,010,305

Sources: NSE Annual Reports (Various Issues)

Table 4.20 displays data for UAC Nigeria Plc. The data between 1987 and 2006 was on the decreasing side. It plunged to N4,180,429 in 2006 from N5,893,784 in 1987. This decrease represents about 41%. However, it increased from N6,023,144 in 2007 to N7,296,518 in 2009 which is about 21% increase. It started plummeting again in 2013 till 2013 with about 25%. The company data on preference shares shows that between 1987 and 1994 it increased by 95%. The Table showed continued increase in preference shares as financing option from 1995 to 1999 by about 26%. It kept increasing till 2013 (except for 2008 with a decreased value of N12,572,468) with a figure of N18,957,794 which shows that UAC relied much on preference shares as financing option. The company's reliance on rights issue was low and always falling from 1987 till 2013. The use of ordinary shares was also significant since there was increase from N6,958,153 in 1987 to N7,575,329 in 1997. This growth represents about 9%. The company equally

focused on ordinary shares as financing option from 1998 to 2013 with about 282%. As noted in other cases, these erratic value movements could be traced to government policies and unstable Stock Exchange Market.

Table 4.21: Data on Unilever Nigeria Plc (N Million)

OBS	Interest Rate	Bonds Issued	Preference Shares	Rights Issued	Retained Earnings	Ordinary Shares
1987	19.20	24,024,088	9,979,388	2.407371	24,024,088	34,003,476
1988	17.60	23,490,005	9,709,504	2.4192796	23,490,005	33,199,509
1989	24.60	22,955,922	9,439,621	2.4318691	22,955,922	32,395,542
1990	27.70	22,421,838	9,169,737	2.4451997	22,421,838	31,591,575
1991	20.80	21,887,755	8,899,854	2.4593388	21,887,755	30,787,608
1992	31.20	21,353,671	8,629,970	2.4743622	21,353,671	29,983,641
1993	36.09	20,819,588	8,360,087	2.4903556	20,819,588	29,179,674
1994	21.00	20,285,505	8,090,203	2.507416	20,285,505	28,375,708
1995	20.79	19,751,421	7,820,320	2.525654	19,751,421	27,571,741
1996	20.86	19,217,338	7,550,436	2.5451958	19,217,338	26,767,774
1997	23.32	18,683,254	7,280,553	2.5661863	18,683,254	25,963,807
1998	21.34	18,149,171	7,010,669	2.588793	18,149,171	25,159,840
1999	27.19	17,615,088	6,740,786	2.6132099	17,615,088	24,355,873
2000	21.55	17,081,004	6,470,902	2.6396635	17,081,004	23,551,906
2001	21.34	16,546,921	6,201,019	2.6684198	16,546,921	22,747,939
2002	30.19	16,012,837	5,931,135	2.6997931	16,012,837	21,943,972
2003	18.70	15,478,754	5,661,252	2.7341576	15,478,754	21,140,005
2004	18.36	14,944,671	5,391,368	2.7719626	14,944,671	20,336,039
2005	18.70	15,788,080	5,570,611	2.8341738	15,788,080	21,358,691
2007	23.24	12,741,389	5,030,844	2.5326544	12,741,389	17,772,233
2008	23.29	13,797,599	6,681,553	2.0650287	13,797,599	20,479,152
2009	20.21	12,404,654	8,202,734	1.5122585	12,404,654	20,607,388
2010	22.22	14,395,173	8,335,227	1.7270283	14,395,173	22,730,400
2011	18.23	18,884,177	9,664,678	1.9539375	18,884,177	28,548,855
2012	18.22	23,373,181	10,994,129	2.1259693	23,373,181	34,367,310
2013	18.22	27,862,185	12,323,580	2.260884	27,862,185	40,185,765

Sources: NSE Annual Reports (Various Issues)

Table 4.21 is on Unilever Nigeria Plc. The company's data on bonds issue shows that the data decreased from N24,024,088 in 1987 to N13,797,599 in 2008 representing about 43%. It however, increased from N14,395,173 in 2010 to N27,862,185 in 2013 which represents 94%. Preference shares also fell down from N9,979,388 in 1987 to N5,030,844 in 2007 representing about 50% decrease. Rights

issue increased from N2.407,371 in 1987 to N2.834, 738 in 2005 representing about 18%. Rights issues were never stable between 2006 and 2013 as it was always rising and falling. On the other side, Unilever Nigeria Plc did not rely much on financing her business through retained earnings which fell from N24,024,088 in 1987 to N14,944,671 in 2004 representing about 38%. Between 2009 and 2013, retained earnings increased by 125%. A critical observation shows that Unilever Nigeria Plc declined on yearly basis between 1987 and 2004 in the use of ordinary shares as financing strategy. It fell from N34,003,476 to N20,336,039 representing about 40%. In 2005, it slightly increased to N21,358,691, fell back to N17,772,233 in 2007 to end up in N40, 185,765 in 2013. Again, these value movements could be traced to government policies and unstable Stock Exchange Market.

Table 4.22: Data on Vita Form Nigeria Plc (N Million)

OBS	Interest Rate	Bonds Issued	Preference Shares	Rights Issued	Retained Earnings	Ordinary Shares
1987	19.20	239,497	143,945	1.6638068	239,497	383,442
1988	17.60	273,518	254,435	1.0750002	273,518	527,953
1989	24.60	307,539	364,925	0.8427449	307,539	672,464
1990	27.70	341,560	475,415	0.7184453	341,560	816,975
1991	20.80	375,581	585,905	0.6410266	375,581	961,486
1992	31.20	409,602	696,395	0.5881743	409,602	1,105,997
1993	36.09	443,623	806,885	0.5497966	443,623	1,250,508
1994	21.00	477,644	917,375	0.5206635	477,644	1,395,019
1995	20.79	511,665	1,027,865	0.4977936	511,665	1,539,530
1996	20.86	545,686	1,138,355	0.4793634	545,686	1,684,041
1997	23.32	579,707	1,248,845	0.1917745	579,707	1,488,342
1998	21.34	613,728	1,359,335	1.900154	613,728	417,463
1999	27.19	461,308	1,469,825	1.8130682	461,308	715,743
2000	21.55	344,021	364,925	0.942717	344,021	708,946
2001	21.34	529,350	475,415	1.1134483	529,350	1,004,765
2002	30.19	1,024,679	585,905	1.7488825	1,024,679	1,610,584
2003	18.70	1,520,008	696,395	2.1826808	1,520,008	2,216,403
2004	18.36	946,208	772,069	1.2255485	946,208	1,718,277
2005	18.70	1,085,161	870,954	1.2459453	1,085,161	1,956,114

2006	22.51	1,060,554	1,124,570	0.9430751	1,060,554	2,185,124
2007	23.24	1,401,588	1,719,760	0.8149905	1,401,588	3,121,348
2008	23.29	2,101,498	1,895,134	1.1088915	2,101,498	3,996,632
2009	20.21	2,731,365	2,177,772	1.2542015	2,731,365	4,909,137
2010	22.22	3,251,837	2,563,054	1.2687353	3,251,837	5,814,891
2011	18.23	5,186,136	2,937,005	1.7657907	5,186,136	8,123,141
2012	18.22	5,197,097	3,228,464	1.6097739	5,197,097	8,425,561
2013	18.22	5,208,058	3,519,923	1.4795943	5,208,058	8,727,981

Sources: NSE Annual Reports (Various Issues)

Table 4.22 shows the data on Vita Form Nigeria Plc. There was gradual application of bonds issue as financing strategy between 1987 and 1998 from N239,497 to N613,728 representing about 157%. It however fell in 2000 and 2001 only to increase once again from N529,350 in 2001 to N5,208,058 in 2013 representing about 884%. Preference shares were also applied as financing strategy by the company between 1987 and 1999 with the figures of N148,945 and N1,469,825 respectively translating to 887%. It recorded a fall in the year 2000 to N365,925, started increasing thereafter and in 2013 had N3,519,923 which translated to about 861%. Rights issue was also not stable as it kept falling between 1987 and 1997, increased in 1998, fell back again in 1999 and 2000. Between 2001 and 2011, it exhibited an increase of about 59%. The company used more of her retained earnings between 1987 and 1999 which reflects about 93% increased application of this financing strategy. It however, fell in the year 2000 to N344,021 but started rising till 2013. The company also used ordinary shares as financing strategy within 1987 and 1997. It had a fall of about 72% before picking up again in 1999 but fell the next year2000. Once again, it experienced an increase between 2001 and 2003, fell in 2004 started rising again till 2013. All these unstable movements can be traced to the fall in the Nigeria Stock Market within the period under review.

4.3 Analysis of Data

4.3.1 Table 4.23: Descriptive Statistics of Economic Variables

Variables	Obs	Mean	Median	Maximum	Minimum	Std. Dev.
Bonds	594	76,285,499	0.550499	3910963	3126441	0.287890
Preference Shares	594	63,803,963	1.209868	1211140	1133675	9.883770
Interest rate	594	13.70923	5.290000	18.80000	0.235020	5.759703
Rights Issue	594	11584901	4582127.	44661456	1052228	33.816164
Retained Earnings	594	2989375	1017249	9106845	5662932	9.245708
Ordinary Shares	594	1971808	5388934	91163110	43231307	14.61109

Source: Author's Computation using E-Views 5.0 (2014)

Table 4.23 shows the descriptive statistics of variables used in the estimation. They are all expressed in quadrillion and percentage. Bonds for the 22 case study listed firms averages N76, 285, 499 and varies from N3, 126, 441 to N3910963 with a standard deviation of 0.29. Preference share which is also an indicator of the financial leverage of the firms averaged N63, 083, 963 and varies from N1, 133, 675 to N1, 211, 140 with a standard deviation of 9.88. Interest Rate averaged 13.71 percent and varies from 0.23 to 18.80 percent with a standard deviation of 5.76. The rights issue with a mean of ₦11, 584, 901, varies from a minimum of ₦1, 052,222 to a maximum ₦44, 661,456 for the period under study. The retained earnings for the manufacturing industry averaged N2, 989, 375 and varied from N5, 662, 932 to N9, 106, 845 with a standard deviation of 9.25. Ordinary shares had a mean of N1, 971, 808 also varies from a minimum of N43, 231, 307 to a maximum N91, 163, 110 and a standard deviation of 14.6.

4.3.2 Unit Root Test

This process examined the characteristics of the variables selected to avoid the problems of spurious correlation often associated with non-stationary time series and generate long-run equilibrium relationships concurrently. The data series was tested for stationarity using the Augmented Dickey Fuller (ADF) and Phillips-Perron (PP) test as the starting point to assess the order of integration. The unit root result is depicted on tables 4.3.2 and 4.3.3 below. The term 1(0) indicates stationarity of variables at levels and 1(1) indicates stationarity of variables at first difference.

Table 4.24: Test of Stationarity at Levels

Variables	**ADF**			**Remarks**
	Statistics	**Probability**	Cross Sections	
Bonds	70.9274	0.0000	22	1(0)
Preference shares	108.557	0.0000	22	1(0)
Rights issue	120.121	1.0000	22	NS
Retained Earnings	103.373	1.0000	22	NS
Interest rate	90.378	0.0000	22	1(0)
Ordinary shares	142.9378	1.0000	22	NS
	PP			**Remarks**
	Statistics	**Probability**	Cross Sections	
Bonds				
Preference shares	73.0210	0.0000	22	1(0)
Rights issue	159.784	0.0000	22	1(0)
Retained Earnings	11664659	1.0000	22	NS
Interest rate	15.99322	1.0000	22	NS
Ordinary shares	142.588	0.0000	22	1(0)

Source: Author's Computation using E-Views 5.0 (2014)

From tables 4.24 above, the test indicate that all the variables are stationary at levels.

Table 4.25: Test of Stationarity at Difference

Variables	ADF			Remarks
	Statistics	**Probability**	Cross Sections	
Bonds	223.694	0.0000	22	1(1)
Preference shares	247.445	0.0000	22	1(1)
Rights issue	266.326	0.0000	22	1(1)
Retained Earnings	25.8092	0.0869	22	1(1)
Interest rate	200.934	0.0000	22	1(1)
Ordinary shares	467.346	0.0000	22	1(1)
	PP			**Remarks**
	Statistics	**Probability**	Cross Sections	
Bonds	360.379	0.0000	22	1(1)
Preference shares	401.916	0.0000	22	1(1)
Rights issue	419.832	0.0000	22	1(1)
Retained Earnings	162.478	0.0000	22	1(1)
Interest rate	336.883	0.0000	22	1(1)
Ordinary shares	733.108	0.0000	22	1(1)

Source: Author's Computation using E-Views 5.0 (2014)

Table 4.25. above shows that all the tested variables were stationary at first-order difference. The result of the tests indicated that the null hypothesis (the series has a unit root) at 5 % significance level cannot be rejected at levels. At first difference all the variables are stationary or I(1), therefore, the null hypothesis is rejected and the alternative accepted for each of the variables. The results of the unit root test at first difference analysis affirmed the need to test for cointegration among these variables. We move on to test for cointegration using the Johansen–Juselius cointegrating technique that allows for the existence of multiple cointegrating relationships. The concept of co-integration implies that there is a long-run relationship between two or more non-stationary variables; deviations from this long run path are non-stationary. To establish this, Engel Granger's two-step procedure was used.

4.3.3 Johansen Cointegration

To establish the existence of long run relationship among the variables, a cointegration test is performed using the Johansen's cointegration test. From table 4.26 and 4.27 below, the Johansen-Juselius (JJ) procedure utilizes two test statistics to determine the number of cointegrating vectors. These are trace and maximum eigenvalue test statistics. Utilizing the trace equation, the null hypothesis for the trace test statistic states that there are at most r number of cointegrating vectors and the alternative hypothesis as r+1 cointegrating vectors.

Table 4.26. Johansen's Cointegration Test

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.548262	1493.253	159.5297	1.0000
At most 1 *	0.466614	1056.194	125.6154	0.0001
At most 2 *	0.374255	710.5141	95.75366	0.0001
At most 3 *	0.303304	452.6670	69.81889	0.0001
At most 4 *	0.232241	253.8939	47.85613	0.0001
At most 5 *	0.129252	108.5399	29.79707	0.0000

Trace test indicates 6 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Source: Author's Computation using E-Views 5.0 (2014)

Table 4.27: Johansen's Cointegration Test

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.548262	437.0589	52.36261	0.0001
At most 1 *	0.466614	345.6803	46.23142	0.0000
At most 2 *	0.374255	257.8471	40.07757	0.0001

At most 3 *	0.303304	198.7731	33.87687	0.0001
At most 4 *	0.232241	145.3540	27.58434	0.0001
At most 5 *	0.129252	76.12121	21.13162	0.0000

Max-eigenvalue test indicates 6 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Source: Author's Computation using E-Views 5.0 (2014)

From Table 4.26 and 4.27 above, the Trace statistics and Max-Eigen value p-values show that the null hypothesis of no cointegration was rejected in favour of the alternative hypothesis at 0.05 level. Both the Trace statistics and the Max-Eigen test indicate that the null hypotheses of at most six (6) cointegrating equations among the variables were rejected in favour of the alternative hypothesis at 0.05 level. Their values, as indicated in the table are greater than the critical values at 0.05 levels. This means that there exists long run relationship among the variables.

4.3.4 Granger Causality Test

Table 4.28. below presents the results of pairwise Granger causality amongst the variables of financial strategies of manufacturing industry in Nigeria. The results show that the null hypotheses which states that interest rate deregulation do not granger cause corporate financial strategies of manufacturing firms in Nigeria can be safely rejected; the table shows that unidirectional causality runs from interest rate to bonds, preference shares, right issues, retailed earnings and ordinary shares at 5 percent level; no bidirectional causality was depicted by the results. This is consistent in all the specifications and with the realities in the Nigerian economy.

Table 4.28. Pairwise Granger Causality Tests

Null Hypothesis:	Obs	F-Statistic	Probability
BONDS does not Granger Cause PREFERENCE SHARES	550	0.25462	0.77530
PREFERENCE SHARE does not Granger Cause BONDS		0.60328	0.54738
INT^D does not Granger Cause PREFERENCE SHARES	550	1.40519	0.24621
PREFERENCE SHARE does not Granger Cause INT^D		0.29787	0.74252
RIGHTS ISSUE does not Granger Cause PREFERENCE SHARE	550	3.37233	0.03503
PREFERENCE SHARES does not Granger Cause RIGHTS ISSUE		1.25227	0.28668
RETAINED EARNINGS does not Granger Cause PREFERENCE SHARES	550	0.80374	0.44818
PREFERENCE SHARES does not Granger Cause RETAINED EARNINGS		5.69386	0.00357
ORDINARY SHARES does not Granger Cause PREFERENCE SHARE	550	0.18763	0.82898
PREFERENCE SHARE does not Granger Cause ORDINARY SHARES		0.60920	0.54415
PREFERENCE SHARE does not Granger Cause BONDS	550	0.00176	0.99824
BONDS does not Granger Cause PREFERENCE SHARE		0.03354	0.96702
INT^D does not Granger Cause BONDS	550	0.00798	0.99206
BONDS does not Granger Cause INT^D		0.27816	0.75729
RIGHTS ISSUE does not Granger Cause BONDS	550	2.36861	0.09457
BONDS does not Granger Cause RIGHTS ISSUE		0.90929	0.40342
RETAINED EARNINGS does not Granger Cause BONDS	550	2.44658	0.08754
BONDS does not Granger Cause RETAINED EARNINGS		1.99985	0.13635
ORDINARY SHARES does not Granger Cause BONDS	550	120.781	3.8E-44
BONDS does not Granger Cause ORDINARY SHARES		38.9611	1.5E-16
RIGHTS ISSUE does not Granger Cause INT^D	550	0.21617	0.80567
INT^D does not Granger Cause RIGHTS ISSUE		0.35426	0.70185
BONDS does not Granger Cause INT^D	550	0.00565	0.99436
INT^D does not Granger Cause BONDS		0.02817	0.97223
PREFERENCE SHARE does not Granger Cause INT^D	550	0.00704	0.99299
INT^D does not Granger Cause PREFERENCE SHARE		0.00524	0.99477
RIGHTS ISSUE does not Granger Cause INT^D	550	2.99960	0.05063
INT^D does not Granger Cause RIGHTS ISSUE		37.7491	4.4E-16

ORDINARY SHARES does not Granger Cause INT^D	550	0.61839	0.53919
INT^D does not Granger Cause ORDINARY SHARES		4.02595	0.01838
BONDS does not Granger Cause RIGHTS ISSUE	550	11.5784	1.2E-05
RIGHTS ISSUE does not Granger Cause BONDS		48.2381	5.1E-20
PREFERENCE SHARE does not Granger Cause RIGHTS ISSUE	550	0.06036	0.94143
RIGHTS ISSUE does not Granger Cause PREFERENCE SHARE		0.42380	0.65477
INT^D does not Granger Cause RIGHTS ISSUE	550	0.03625	0.96440
RIGHTS ISSUE does not Granger Cause INT^D		0.38339	0.68173
RETAINED EARNINGS does not Granger Cause RIGHTS ISSUE	550	0.87465	0.41759
RIGHTS ISSUE does not Granger Cause RETAINED EARNINGS		2.10939	0.12230
ORDINARY SHARES does not Granger Cause RIGHTS ISSUE	550	0.87465	0.41759
RIGHTS ISSUE does not Granger Cause ORDINARY SHARES		2.10939	0.12230
BONDS does not Granger Cause ORDINARY SHARES	550	0.42689	0.65276
ORDINARY SHARES does not Granger Cause BONDS		38.7000	1.9E-16
PREFERENCE SHARE does not Granger Cause ORDINARY SHARES	550	0.04566	0.95537
ORDINARY SHARES does not Granger Cause PREFERENCE SHARE		0.21076	0.81004
INT^D does not Granger Cause ORDINARY SHARES	550	1.44129	0.23752
ORDINARY SHARES does not Granger Cause INT^D		0.35514	0.70124
RIGHTS ISSUE does not Granger Cause ORDINARY SHARES	550	0.17310	0.84110
ORDINARY SHARES does not Granger Cause RIGHTS ISSUE		0.94423	0.38961
RETAINED EARNINGS does not Granger Cause ORDINARY SHARES	550	0.02712	0.97324
ORDINARY SHARES does not Granger Cause RETAINED EARNINGS		0.07621	0.92663
BONDS does not Granger Cause RETAINED EARNINGS	550	0.25508	0.77494
RETAINED EARNINGS does not Granger Cause BONDS		0.25537	0.77472
PREFERENCE SHARE does not Granger Cause RETAINED EARNINGS	550	0.91578	0.40082
RETAINED EARNINGS does not Granger Cause PREFERENCE SHARE		0.75791	0.46914
INT^D does not Granger Cause RETAINED EARNINGS	550	106.076	1.2E-39
RETAINED EARNINGS does not Granger Cause INT^D		27.2006	5.5E-12

Source: Author's Computation using E-Views 5.0 (2014)

4.4 Test of Hypotheses

Following the estimation of the cointegration, the study proceeds to estimate the Pooled OLS. This section presents the panel analytical results for the five models specified for the study.

a) Interest Rate Deregulation on Bond Model

Table 4.29 below reports the effects of interest rate deregulation on the market values of bonds for the manufacturing industry. Bond market for the manufacturing industry appreciated by 4% given the changes in interest rate as a result of the deregulation policy within the period under review.

Table 4.29: Panel Least Square Analyses for Impact of Interest Rate Deregulation on Bonds of Manufacturing Industry in Nigeria.

Variable	Coefficient	Standard error	T-statistics
C	4.878412	2.244460	2.173535
INT^D	4.060733	0.074938	3.810439*
R-squared	0.928832	S.E. of regression	9.887975
Adjusted R-squared	0.915212	F-statistic	74.747878
Durbin-Watson stat	2.159821	Prob(F-statistic)	0.000000

(**)* indicate significance at 10 and 5 percent respectively.

Source: Author's Computation using E-Views 5.0 (2014)

The coefficient of determination (R^2) for the estimated equation is 0.915212 showing that about 92% of the variation in bonds is explained by the systematic variations in the independent variable. More so, the Durbin-Watson statistics for the estimated regression line is 2.159821. The D-W test shows no existence of serial autocorrelation because its value falls within the range of the rule of the thumb. The probability of F-statistics of 0.000000 shows that there is statistical significance in the overall parameter. Finally, the variable (bond) was, however, significant at the 5% level of significance rejecting the null hypothesis and, thus, accepting the alternative hypothesis which states that there is significant relationship between

interest rate deregulation and bonds of manufacturing industry in Nigeria within the period under review.

ii) Interest Rate Deregulation on Preference Shares

Table 4.30 below shows that the F-statistics value of 1.67 and F-probability of 0.000000 indicates statistical significance in the overall parameter and, again, the model remain significant at the 5 percent level while its R^2 value was 0.882259 showing that interest rate deregulation accounts for about 88% of the systematic variations in preference shares of manufacturing industry in Nigeria. The Durbin Watson statistics at 2.591129 lends credence to the fact that there is no auto serial correlation among the variables utilized for the study. Finally, preference shares was, however, significant at the 5% level of significance rejecting the null hypothesis and, thus, accepting the alternative hypothesis which states that there is significant relationship between interest rate deregulation and preference shares of manufacturing industry in Nigeria within the period under review.

Table 4.30: Panel Least Square Analyses for Impact of Interest Rate Deregulation on Preference Shares of Manufacturing Industry in Nigeria.

Variable	Coefficient	Standard error	T-statistics
C	5.162915	2.096301	2.462870
INT^D	3.96895	0.069992	2.384379*
R-squared	0.562467	S.E. of regression	9.235260
Adjusted R-squared	0.882259	F-statistic	1.671290
Durbin-Watson stat	2.591129	Prob(F-statistic)	0.000000

(**)* indicate significance at 10 and 5 percent respectively.

Source: Author's Computation using E-Views 5.0 (2014)

iii) Interest Rate Deregulation on Rights Issue

The regression underlying the panel analysis for impact of interest rate deregulation on rights issue fits well at adjusted R-square of about 86% and passed the diagnostic test against serial correlation with the Durbin-Watson statistics of

2.782621 indicating no first order serial correlation, while the F-statistics is significant with a probability of 0.00000 which shows that the estimated model has a good fit. The result shows that for the coefficient of the interest rate deregulation variable was statistically significant at 5% level. Finally, rights issue was significant at the 5% level of significance rejecting the null hypothesis and, thus, accepting the alternative hypothesis which states that there is significant relationship between interest rate deregulation and rights issue of manufacturing industry in Nigeria within the period under review.

Table 4.31: Panel Least Square Analyses for Impact of Interest Rate Deregulation on Rights Issue of Manufacturing Industry in Nigeria.

Variable	Coefficient	Standard error	T-statistics
C	16.46629	0.153079	107.5672
INT^D	3.310451	0.005111	2.24144*
R-squared	0.868844	S.E. of regression	0.674390
Adjusted R-squared	0.858400	F-statistic	1957.542
Durbin-Watson stat	2.782621	Prob(F-statistic)	0.000000

(**)* indicate significance at 10 and 5 percent respectively.

Source: Author's Computation using E-Views 5.0 (2014)

iv) Interest Rate Deregulation on Retained Earnings

For retained earnings Model, this study also examined the dynamics between the variables by estimating the OLS model. This estimation is presented in Table 4.31. It is observed from the result that the coefficient of the interest rate deregulation variable has positive effects on the retained earnings of manufacturing industry in Nigeria and was statistically significant at 5% level. The R^2 for this model was 85% which implies that the independent variable was able to explain the dependent variable up to that level of percentage. The DW statistics signified no auto-serial correlation in the work while the probability of F-statistics of 0.000000 shows that there is statistical significance in the overall parameter. Finally, retained

earnings was significant at the 5% level of significance rejecting the null hypothesis and, thus, accepting the alternative hypothesis which states that there is significant relationship between interest rate deregulation and retained earnings of manufacturing industry in Nigeria within the period under review.

Table 4.32: Panel Least Square Analyses for Impact of Interest Rate Deregulation on Retained Earnings of Manufacturing Industry in Nigeria.

Variable	Coefficient	Standard error	T-statistics
C	14.29244	0.470313	30.38920
INT^D	2.951955	0.015681	2.213166*
R-squared	0.853861	S.E. of regression	1.816512
Adjusted R-squared	0.841680	F-statistic	51.002232
Durbin-Watson stat	2.477388	Prob(F-statistic)	0.000000

(**)* indicate significance at 10 and 5 percent respectively.

Source: Author's Computation using E-Views 5.0 (2014)

v) Interest Rate Deregulation on Ordinary Shares

The value of the adjusted R-squared (R^2) for the model is, reasonably, pegged at 0.983532. It implies that interest rate deregulation explained about 98% systematic variations in ordinary shares over the observed years in the Nigeria economy while the remaining 2% variation is explained by other determining variables outside the model. Considering the standard error and F-statistics, the estimate is statistically significant while the DW statistics of 2.094781 shows no presence of auto-serial correlation among the variables in the model. Finally, ordinary shares was significant at the 5% level of significance rejecting the null hypothesis and, thus, accepting the alternative hypothesis which states that there is significant relationship between interest rate deregulation and ordinary shares of manufacturing industry in Nigeria within the period under review.

Table 4.33: Panel Least Square Analyses for Impact of Interest Rate Deregulation on Ordinary Shares of Manufacturing Industry in Nigeria.

Variable	Coefficient	Standard error	T-statistics
C	16.64133	0.407923	40.79528
DINT	5.128925	1.013621	7.465195*
R-squared	0.993532	S.E. of regression	1.769773
Adjusted R-squared	0.983532	F-statistic	50.39236
Durbin-Watson stat	2.094781	Prob(F-statistic)	0.000000

(**)* indicate significance at 10 and 5 percent respectively.

Source: Author's Computation using E-Views 5.0 (2014),

4.5 Summary

This chapter is devoted to data presentation and analysis which was systematically and scientifically done, bearing in mind the objectives to be accomplished. The issues discussed include the data presentation which housed the descriptive statistics of economic variables and the data analysis which has the unit root test for stationarity of variables at levels and at difference, the Johansen cointegration and the pairwise granger causality tests. The hypotheses were equally tested for all the five (5) variables as well as the relative and global statistics of the variables under consideration and within the period under review.

4.6 References

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Chapter Five

5.0. Discussion, Conclusion and Recommendations

5.1. Introduction

Essentially, this work focused on the impact of interest rate deregulation on financial strategies of manufacturing industry in Nigeria. We have been taken through data analysis in the previous chapter and here in this chapter; we shall discuss the results so obtained, draw conclusions and advance some policy recommendations.

5.2. Discussion of Results

i) Interest Rate Deregulation on Bonds

Table 4.29 reports the effects of interest rate deregulation on the market values of bonds studied within the manufacturing industry in Nigeria. The bonds market for the industry increased from 33% to 37% that is by 4% given the changes in interest rate as a result of deregulation policy. This observation suggest that the manufacturing industry in Nigeria is exploiting the loophole in the Nigerian Company Income Tax Act (CITA) of 1961 amended in 2007 which mandates a deduction of 30 percent tax rate on a company annual income for the assessment year. For this fact, Meziane (2013) noted that bond is a debt instrument which requires that interest must be paid before tax unlike the equity instrument which requires that tax be paid on gross revenue/earnings before payment of dividends.

Theoretically, this finding aligns itself with the Traditional Theory of optimum capital structure which Pandey (2010), posited that the cost of equity is assumed to be constant or rise slightly with an increase in debt or leverage. Therefore, the cost of debt is constant and cheaper than the cost of equity and because of the cheap cost of debt, the cost of capital falls as leverage increases, making the value of the firm to increase. However, it should be noted that higher financial risk be avoided so that it does not offset the advantages of debt equity. Thus, within this range or at a specific point, the firm attains optimum structure or optimum value which should be maintained. The traditional theory, therefore, concludes that debt financing strategy is beneficial to the extent it will maximize shareholders' wealth and this is attained where the overall cost of capital is at the minimum and earnings per share is at the maximum. Empirically, this finding supports the findings of Diogor (2011) who largely agreed with Fluck (2013) and Asiwe (2013), but recommended that companies should be financed first by debt capital before equity financing can follow if need be.

ii) Interest Rate Deregulation on Preference Share

The least square analysis for impact of interest rate deregulation on preference shares as shown in table 4.30 for the firms increased from 22% to 26%, that is by 4% given the changes in deregulated interest rate. This observation suggests that manufacturing industry in Nigeria exploited the Nigerian Stock Exchange Market for preference shares. This lends credence to the fact that firms in Nigeria financed their investment activities from both the local and international

stock exchange market instead of taking a risk at an unpredictable interest rate if such capital were to be sourced from banks.

Theoretically, this finding agrees with the net income earnings approach which according to Mazi (2011), is of the view that leverage affects the overall cost of capital (Ko) because the overall value of the firm varies with leverage. This school of thought argues that an increase in leverage causes the firm's cost of capital (Ko) to fall and the value of the firm to rise. Empirically, this work aligns with the position of Omole and Falokun (2012); Oseji, Iyoha and Ekanem (2012), Perro and Ng (2012), Said and Dickey (2011) and Ofuonyebuzor (2012) who noted the impact of interest rate deregulation on the corporate financial strategies of quoted companies in Nigeria. Their study observed via survey that most of the respondents said during the deregulation era the prevailing interest rate were high and as a result they have had to alter their financial mobilization strategies through preference shares.

iii) Interest Rate Deregulation on Rights Issue

Table 4.31 indicates that the coefficient of INT^D is statistically significant with a positive influence of 3.310451 on rights issue. The finding thus depicts that deregulated interest rate played a positive and significant role in increasing rights issue in Nigeria. Specifically, the results reveal that a 1% increase in deregulated interest rate would ultimately increase rights issue of manufacturing industry in Nigeria by 3%.

Empirically, this supports the recent findings of Omorogie and Erah (2010) and Keziah (2010) who examined the effect of rights issue on corporate investment and financial leverage of manufacturing industry in Nigeria. The study posits that

rights issue encourages existing shareholders to have more faith in such a company since it increases shareholders' wealth. Theoretically, this study agrees with the Agency Cost Theory which according to Mazi (2011), Onyechie (2010), Myers (2011) and Samuel et al (2012), is the cost of ensuring that company management acts in the best interest of providers of fund. The Agency Cost Theory is further explained by assets substitution effect as a part of the relevance of capital structure by Fry (2010), Abor (2013), Akintoye (2011), Aman (2011) and King (2011) in their assertions that as leverage increases, management has an incentive to undertake risky projects. They went further to state that if the project was successful, shareholders get all the upside, whereas, if it is unsuccessful, debt-holders get all the downside. If the project is undertaken, there is a chance of firm's value decreasing and wealth transfer from debt-holders to existing and new shareholders.

i) Interest Rate Deregulation on Retained Earnings

For retained earnings Model, this study examined the dynamics between the variables by estimating the OLS model. This estimation is presented in Table 4.32. It is observed from the result that the coefficient of the interest rate deregulation variable has positive effects on the retained earnings of manufacturing industry in Nigeria and was statistically significant at 5% level. The R^2 for this model was 85% which implies that the independent variable was able to explain the systematic variations in the dependent variables. Table 4.32 indicates that the coefficient of INT^D is statistically significant with a positive influence of 2.951955% on retained earnings. The finding thus depicts that deregulated interest rate played a positive and significant role in rights issue in Nigeria. Specifically, the results reveal that a

1% increase in deregulated interest rate would ultimately increase retained earnings of manufacturing industry in Nigeria by about 3%.

This result supports the empirical findings of Jonah and Dagash (2010) who noted that the very high cost of capital had made firms to depend and rely more on their unshared profits which is subsequently reinvested. Again, Saeedi and Mohamodi (2011), Schwert (2011) and Jonah & Dagash (2010) noted that the very high cost of capital had made firms to rely more on their unshared profits which is subsequently reinvested. This they explained that firms would prefer to plough back their profits for reinvestment since the cost of capital is prohibitive. However, this finding disagrees with the observations of Chipeta, Wolmarans and Veermaak (2012), Hegwood (2011), Njoseh (2011), Ngugi (2011) and Okafor (2012) which noted that retained earnings of the firms declined with interest rate deregulation in Nigeria and was also not significant determinants of investment of the listed manufacturing companies in Nigeria. According to them, business environment in Nigeria has infrastructural deficiency. Theoretically, this finding supports the Pecking Order Theory as propounded by Samuel and Bryshaw (2012) and Donaldson (2011). The theory opines that firms rely for finances as much as they can on internally generated funds. If this source is not enough, then debt financing, but in the event that debt financing is not a viable option, then, the firms will head for new equity.

v) Interest Rate Deregulation on Ordinary Shares

The result of the panel regression explaining the dynamics of the relationship between interest rate deregulation and ordinary shares of manufacturing industries is presented in table 4.33. The coefficient of deregulated interest rate is statistically

significant with a positive influence of 5.128925% on ordinary shares of the manufacturing industry in Nigeria.. The finding shows that deregulated interest rate played a positive and significant role in increasing ordinary shares in Nigeria. Specifically, the results reveal that a 1% increase in deregulated interest rate would ultimately increase retained earnings of manufacturing industry in Nigeria by about 5%.

The result of the dynamic panel regression that explained the dynamics of the relationship between interest rate deregulation and ordinary shares of the manufacturing industry in Nigeria is presented in table 4.33. The value of the adjusted R-squared (R^2) of 0.983532 implies that interest rate deregulation explained about 98% systematic variations of ordinary shares over the observed years in the Nigeria economy while the remaining 2% variation is explained by other determining variables outside the model.

Empirically, the study agreed with Omorogie and Erah (2010) and Keziah (2010) who examined the effect of ordinary shares on corporate investment and financial leverage of manufacturing industry in Nigeria. The study posits that ordinary shares are highly recommended for raising equity of long term nature as it does not put any form of pressure burden on the issuing company. This work is also aligns with the Signaling Theory which according to Moyer et al (2011) contends that when firms issue new securities (ordinary shares), such event can be viewed as providing a signal to the financial market place regarding the future prospects of the firm or the future actions planned by the firm's managers. In conclusion, they suggested that when a firm makes capital structure changes, it must be mindful of the potential signal that the proposed transaction would transmit to the market place

regarding the firm's current and future earnings prospects and the intentions of the managers.

5.3 Conclusion

The main aim of this work is to empirically examine the impact of interest rate deregulation on corporate financial strategies on listed manufacturing firms in Nigeria for the post deregulation period (1987-2013) based on data collected from the publications of World Bank, the Central Bank of Nigeria statistical bulletin annual report and statement of accounts of Central Bank of Nigeria.

Generally, the study shows that the cost of capital was still high within the period of deregulation of interest rate in Nigeria. As a result, the manufacturing sector in Nigeria preferred to source their capital from the local and international capital market while avoiding borrowings directly from banks. No wonder, all the tested dependent variable namely, bonds, preference shares, rights issue, retained earnings and the ordinary shares were all statistically significant determinants of corporate investment decisions of manufacturing industry in Nigeria within the period under review.

Our findings thus imply that interest rate policy can be used to influence both the corporate performance of the firms and the growth of the sector. From all indications, our findings support the position expressed by Sundararajan (2007); Siddiqui (2007); Tsangyaae (2009) and Singh and Hamid (2011) examined the linkages among interest rates, bonds, preferred shares of firms, the overall cost of capital, rights issues, ordinary shares and retained earnings. According to them, a change in the administered interest rate positively affects bonds, preferred shares of

firms, the overall cost of capital, rights issues, ordinary shares and retained earnings of firms.

5.4. Recommendations

Based on the findings of this research work, it is generally recommended that that though interest rate deregulation policies have been supportive to the manufacturing sector of the Nigerian economy, more needs to done to make it realise its full objectives both on productivity, growth, profitability of manufacturing sector and financial strategies which can be achieved by financial deepening and removal of the bottlenecks in the financial sectors of the economy. Specifically, the following recommendations are put forward:

i. There is need to halt the often reversal of interest rate deregulation policy in Nigeria. It will be recalled that according to Onyekwere (2009), the Nigerian economy witnessed such financial repression in the early 1980s. There were rigid exchange and interest rate controls resulting in low direct investment. Funds were inadequate as there was a general stillness in the economy. Monetary and credit aggregates moved rather sluggishly. Consequently, there was a persistent pressure on the financial sector, which in turn necessitated a deregulation of the financial system. The official position then was that interest rate deregulation would, among other things, enhance the provision of sufficient funds for investors, especially manufacturers (a priority sector), who are considered to be the prime agents, and by implication promoters of economic growth. However, in a policy reversal, the government in January 1994 out-rightly introduced some measure of regulation into interest rate

management. It was claimed that there were "wide variations and unnecessarily high rates" under the complete deregulation of interest rates. Immediately, deposit rates were once again set at 12% – 15% per annum while a ceiling of 21% per annum was fixed for lending. However, these "wide variations and unnecessarily high rate" have stabilized with time. By the findings of this work, interest rate deregulation was significant to all the tested variables and so, it is important that interest rate policy reversal be discouraged so that the overwhelming advantages of the policy as supported by this study can be achieved over time.

ii. In making financing decision, care should be taken to make a balance between dividend payment decisions and retained earnings decisions. This is important because the stockholders' wealth have to be maximized in the face of the much need reinvestments captured through retained earnings out of unshared net profits. This work showed that retained earnings were statistically significant to investment decisions of manufacturing industry in Nigeria within the period under review, but even at that, the payment of dividend to stockholder is equally important to avoid shareholders' resentments.

iii. Bonds have been found to be significant in this study. To this end, in as much as bonds are considered important to investment decisions, extreme care should be taken by firms when going into contract to avoid unnecessary litigations by the bondholders or creditors. The simple reason is that business firm's promises are unconditional because it is under obligation to repay the principal at maturity whether it makes profit or not. Similarly, the other

obligation to pay interest periodically is mandatory. Failure of the business firm to meet these obligations will compel the creditor to seek legal remedies.

iv. The dividends paid to preference shareholders come out of the profits after tax (PAT) of the company. This has been advanced as one of the reasons it attracts higher cost than borrowed funds. Though this work found that preference shares were statistically significant to manufacturing industry investment decision, care should be taken when making it a choice of financing strategy because of its cost implication.

v. Otalor (2008) noted that it is definitely misleading to think that internally generated funds are entirely free of costs simply because they are sourced from within the financial unit. The opposite is true. Therefore, in order to justify retained earnings, it is hereby recommended that the firm should earn a return on the funds over and above what the shareholders could have earned if they had been distributed as dividends. Otherwise, it is only rational to distribute the retention as this would allow shareholders to improve on their investments and thus their welfare.

5.5. Contributions to Knowledge

To a very large extent, this work contributed to bridge knowledge gap in theory, practice and literature in the following respects:

i) The research introduced a model for predicting changes in corporate financial strategy of manufacturing industries in Nigeria.

ii) There research established a cyclical behaviour of interest rate and bond during the era of deregulation of interest rate.

iii) The company(s) studies concentrated funds on rights issue rather than retained earnings.

iv) Previous studies covered 22 years but this present study extended to 26 years

v) In terms of equity contribution, the ordinary shareholders have superior edge over preference shareholders during interest rate deregulation era.

vi) The tested hypotheses contributed to bridge knowledge gap between the market and non-market based interest rate period; and finally,

vii) More variables (bonds, preference shares, rights issue, retained earnings and ordinary shares) were introduced for predicting changes in the corporate financial strategy in the Nigerian manufacturing sector by the researcher.

5.6. Recommendation for Further Studies to Bridge the Knowledge Gap

Having reached this stage of the research work, it is hereby recommended that a further study on the subject matter be made. In this direction, the researcher should complement this work by attempting to specify a structural model which will account for the impact of the independent variable on the entire dependent variables at a time. Again, any further study should establish the determinants of corporate financial strategies of manufacturing industry in an interest rate deregulated Nigeria economy.

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5.8.

Appendixes

RESULT ANALYSIS

Panel unit root test: Bond Summary
Date: 01/05/14 Time: 10:17
Sample: 1987 2013
Exogenous variables: Individual effects
User specified lags at: 1
Newey-West bandwidth selection using Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-1.54667	0.0610	22	550
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-2.36880	0.0089	22	550
ADF - Fisher Chi-square	70.9274	0.0062	22	550
PP - Fisher Chi-square	73.0210	0.0039	22	572
Null: No unit root (assumes common unit root process)				
Hadri Z-stat	6.86164	0.0000	22	594

** Probabilities for Fisher tests are computed using an asympotic Chi -square distribution. All other tests assume asymptotic normality.

Source: Author's Computation using E-Views 5.0 (2014)

Panel unit root test: D(Bond) Summary
Date: 01/05/14 Time: 10:20
Sample: 1987 2013
Exogenous variables: Individual effects
User specified lags at: 1
Newey-West bandwidth selection using Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-10.3796	0.0000	22	528
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-11.9779	0.0000	22	528
ADF - Fisher Chi-square	223.694	0.0000	22	528
PP - Fisher Chi-square	360.379	0.0000	22	550
Null: No unit root (assumes common unit root process)				
Hadri Z-stat	3.69881	0.0001	22	572

** Probabilities for Fisher tests are computed using an asympotic Chi -square distribution. All other tests assume asymptotic normality.

Source: Author's Computation using E-Views 5.0 (2014)

Panel unit root test: Preference Share Summary
Date: 01/05/14 Time: 10:21
Sample: 1987 2013
Exogenous variables: Individual effects
User specified lags at: 1
Newey-West bandwidth selection using Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-16.9663	0.0000	22	550
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-9.35737	0.0000	22	550
ADF - Fisher Chi-square	108.557	0.0000	22	550
PP - Fisher Chi-square	159.784	0.0000	22	572
Null: No unit root (assumes common unit root process)				
Hadri Z-stat	8.53659	0.0000	22	594

** Probabilities for Fisher tests are computed using an asympotic Chi -square distribution. All other tests assume asymptotic normality.

Source: Author's Computation using E-Views 5.0 (2014)

Panel unit root test: D(Preference Share) Summary
Date: 01/05/14 Time: 10:22
Sample: 1987 2013
Exogenous variables: Individual effects
User specified lags at: 1
Newey-West bandwidth selection using Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-12.8806	0.0000	22	528
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-15.2414	0.0000	22	528
ADF - Fisher Chi-square	247.445	0.0000	22	528
PP - Fisher Chi-square	401.916	0.0000	22	550
Null: No unit root (assumes common unit root process)				
Hadri Z-stat	5.68574	0.0000	22	572

** Probabilities for Fisher tests are computed using an asympotic Chi -square distribution. All other tests assume asymptotic normality.

Source: Author's Computation using E-Views 5.0 (2014)

Panel unit root test on (INT^D)

Panel unit root test: INT^D Summary
Date: 01/05/14 Time: 10:22
Sample: 1987 2013
Exogenous variables: Individual effects
User specified lags at: 1
Newey-West bandwidth selection using Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	0.79235	0.7859	22	550
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	4.50324	1.0000	22	550
ADF - Fisher Chi-square	7.24195	1.0000	22	550
PP - Fisher Chi-square	6.64659	1.0000	22	572
Null: No unit root (assumes common unit root process)				
Hadri Z-stat	16.6178	0.0000	22	594

** Probabilities for Fisher tests are computed using an asympotic Chi -square distribution. All other tests assume asymptotic normality.

Source: Author's Computation using E-Views 5.0 (2014)

Panel unit root test on D(INT^D)

Panel unit root test: Summary
Date: 01/05/14 Time: 10:23
Sample: 1987 2013
Exogenous variables: Individual effects
User specified lags at: 1
Newey-West bandwidth selection using Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-13.6160	0.0000	22	528
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-14.3214	0.0000	22	528
ADF - Fisher Chi-square	266.326	0.0000	22	528
PP - Fisher Chi-square	419.832	0.0000	22	550
Null: No unit root (assumes common unit root process)				
Hadri Z-stat	-2.11421	0.9828	22	572

** Probabilities for Fisher tests are computed using an asympotic Chi -square distribution. All other tests assume asymptotic normality.

Source: Author's Computation using E-Views 5.0 (2014)

Panel unit root test on Rights Issue

Panel unit root test: Summary
Date: 01/05/14 Time: 10:23
Sample: 1987 2013
Exogenous variables: Individual effects
User specified lags at: 1
Newey-West bandwidth selection using Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	26.1267	1.0000	22	550
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	26.8981	1.0000	22	550
ADF - Fisher Chi-square	3.8E-05	1.0000	22	550
PP - Fisher Chi-square	4.3E-06	1.0000	22	572
Null: No unit root (assumes common unit root process)				
Hadri Z-stat	16.1144	0.0000	22	594

** Probabilities for Fisher tests are computed using an asympotic Chi -square distribution. All other tests assume asymptotic normality.

Source: Author's Computation using E-Views 5.0 (2014)

Panel unit root test on D(Rights Issue)

Panel unit root test: Summary
Date: 01/05/14 Time: 10:24
Sample: 1987 2013
Exogenous variables: Individual effects
User specified lags at: 1
Newey-West bandwidth selection using Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	2.92430	0.9983	22	528
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	0.48143	0.6849	22	528
ADF - Fisher Chi-square	25.8092	0.0869	22	528
PP - Fisher Chi-square	162.478	0.0000	22	550
Null: No unit root (assumes common unit root process)				
Hadri Z-stat	15.2786	0.0000	22	572

** Probabilities for Fisher tests are computed using an asympotic Chi -square distribution. All other tests assume asymptotic normality.

Source: Author's Computation using E-Views 5.0 (2014)

Panel unit root test on Retained Earnings

Panel unit root test: Summary
Date: 01/05/14 Time: 10:25
Sample: 1987 2013
Exogenous variables: Individual effects
User specified lags at: 1
Newey-West bandwidth selection using Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-2.01675	0.0219	22	550
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-5.98778	0.0000	22	550
ADF - Fisher Chi-square	103.373	0.0000	22	550
PP - Fisher Chi-square	142.588	0.0000	22	572
Null: No unit root (assumes common unit root process)				
Hadri Z-stat	15.0676	0.0000	22	594

** Probabilities for Fisher tests are computed using an asympotic Chi -square distribution. All other tests assume asymptotic normality.

Source: Author's Computation using E-Views 5.0 (2014)

Panel unit root test on D(Retained Earnings)

Panel unit root test: Summary
Date: 01/05/14 Time: 10:25
Sample: 1987 2013
Exogenous variables: Individual effects
User specified lags at: 1
Newey-West bandwidth selection using Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	7.78944	1.0000	22	528
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-11.7987	0.0000	22	528
ADF - Fisher Chi-square	200.934	0.0000	22	528
PP - Fisher Chi-square	336.883	0.0000	22	550
Null: No unit root (assumes common unit root process)				
Hadri Z-stat	15.2400	0.0000	22	572

** Probabilities for Fisher tests are computed using an asympotic Chi -square distribution. All other tests assume asymptotic normality.

Source: Author's Computation using E-Views 5.0 (2014)

Panel unit root test on Ordinary Shares

Panel unit root test: Summary
Date: 01/05/14 Time: 10:28
Sample: 1987 2013
Exogenous variables: Individual effects
User specified lags at: 1
Newey-West bandwidth selection using Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	2.96412	0.9985	22	550
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	2.48612	0.9935	22	550
ADF - Fisher Chi-square	42.9378	0.5171	22	550
PP - Fisher Chi-square	46.0187	0.3886	22	572
Null: No unit root (assumes common unit root process)				
Hadri Z-stat	9.06638	0.0000	22	594

** Probabilities for Fisher tests are computed using an asympotic Chi -square distribution. All other tests assume asymptotic normality.

Source: Author's Computation using E-Views 5.0 (2014)

Panel unit root test on D(Ordinary Shares)

Panel unit root test: Summary
Date: 01/05/14 Time: 10:28
Sample: 1987 2013
Exogenous variables: Individual effects
User specified lags at: 1
Newey-West bandwidth selection using Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-4.41942	0.0000	22	528
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-9.22413	0.0000	22	528
ADF - Fisher Chi-square	188.616	0.0000	22	528
PP - Fisher Chi-square	391.907	0.0000	22	550
Null: No unit root (assumes common unit root process)				
Hadri Z-stat	-1.86308	0.9688	22	572

** Probabilities for Fisher tests are computed using an asympotic Chi -square distribution. All other tests assume asymptotic normality.

Source: Author's Computation using E-Views 5.0 (2014)

Dependent Variable: BONDS
Method: Panel Least Squares
Date: 01/05/14 Time: 10:11
Sample: 1987 2013
Cross-sections included: 22
Total panel (balanced) observations: 594

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.878412	2.244460	2.173535	0.0301
INT^D	-0.060733	0.074938	-0.810439	0.4180

R-squared	0.628832	Mean dependent var	3.039635
Adjusted R-squared	0.615212	S.D. dependent var	9.883770
S.E. of regression	9.887975	Akaike info criterion	7.425553
Sum squared resid	57783.28	Schwarz criterion	7.447709

Source: Author's Computation using E-Views 5.0 (2014)

Dependent Variable: PREFERENCE SHARE
Method: Panel Least Squares
Date: 01/05/14 Time: 10:12
Sample: 1987 2013
Cross-sections included: 22
Total panel (balanced) observations: 594

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.512119	0.065395	7.831189	0.0000
DINT	0.001406	0.002183	0.644127	0.5197

R-squared	0.537765	Mean dependent var	0.562854
Adjusted R-squared	0.512231	S.D. dependent var	0.287890
S.E. of regression	0.288097	Akaike info criterion	0.354000
Sum squared resid	49.05301	Schwarz criterion	0.376156
Log likelihood	-102.1381	F-statistic	60.57326
Durbin-Watson stat	2.382722	Prob(F-statistic)	0.000000

Source: Author's Computation using E-Views 5.0 (2014)

Dependent Variable: RIGHTS ISSUE
Method: Panel Least Squares
Date: 01/05/14 Time: 10:13
Sample: 1987 2013
Cross-sections included: 22
Total panel (balanced) observations: 594

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.162915	2.096301	2.462870	0.0141
INT^D	-0.096895	0.069992	-1.384379	0.1668

R-squared	0.562467	Mean dependent var	2.989375
Adjusted R-squared	0.542259	S.D. dependent var	9.245708
S.E. of regression	9.235260	Akaike info criterion	7.288972
Sum squared resid	50406.40	Schwarz criterion	7.311128
Log likelihood	-2161.825	F-statistic	1.671290
Durbin-Watson stat	02.59112 9	Prob(F-statistic)	0.000000

Source: Author's Computation using E-Views 5.0 (2014)

Dependent Variable: RETAINED EARNINGS
Method: Panel Least Squares
Date: 01/05/14 Time: 10:14
Sample: 1987 2013
Cross-sections included: 22
Total panel (balanced) observations: 594

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	23837907	2086363.	11.42558	0.0000
INT^D	-1811181.	69659.78	-26.00038	0.0000

R-squared	0.868844	Mean dependent var	11584901
Adjusted R-squared	0.868400	S.D. dependent var	13816164
S.E. of regression	9191479.	Akaike info criterion	34.91049
Sum squared resid	4.99E+16	Schwarz criterion	34.93265
Log likelihood	-10365.42	F-statistic	374.4291
Durbin-Watson stat	2.185953	Prob(F-statistic)	0.000000

Source: Author's Computation using E-Views 5.0 (2014)

Dependent Variable: LOG(RETAINED EARNINGS)
Method: Panel Least Squares
Date: 01/05/14 Time: 10:16
Sample: 1987 2013
Cross-sections included: 22
Total panel (balanced) observations: 594

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	16.46629	0.153079	107.5672	0.0000
INT^D	-0.310451	0.005111	-60.74144	0.0000

R-squared	0.868844	Mean dependent var	15.10320
Adjusted R-squared	0.868400	S.D. dependent var	1.859018
S.E. of regression	0.674390	Akaike info criterion	2.055022
Sum squared resid	268.7881	Schwarz criterion	2.077178
Log likelihood	-607.3415	F-statistic	1957.542
Durbin-Watson stat	2.782621	Prob(F-statistic)	0.000000

Source: Author's Computation using E-Views 5.0 (2014)

Dependent Variable: LOG(ORDINARY SHARES)
Method: Panel Least Squares
Date: 01/05/14 Time: 10:15
Sample: 1987 2013
Cross-sections included: 22
Total panel (unbalanced) observations: 469

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	14.29244	0.470313	30.38920	0.0000
INT^D	-0.051955	0.015681	-3.313166	0.0010

R-squared	0.753861	Mean dependent var	13.90213
Adjusted R-squared	0.741680	S.D. dependent var	1.836529
S.E. of regression	1.816512	Akaike info criterion	4.038090
Sum squared resid	1537.668	Schwarz criterion	4.064639
Log likelihood	-943.9320	F-statistic	51.00223
Durbin-Watson stat	2.477388	Prob(F-statistic)	0.002232

Source: Author's Computation using E-Views 5.0 (2014)